

MEDICAL TIMES

Journal for the Family Physician

December, 1960

THE FAMILY PHYSICIAN AND
THE UNWED MOTHER

CAUSE AND TREATMENT OF
HOSPITAL OVER-USE

CUTANEOUS REACTIONS TO LIGHT



The untapped potential of Librium

Librium, as thousands of physicians have discovered, is an extraordinarily effective agent for the relief of anxiety, agitation and tension. But the fact that Librium can produce dramatic results—often in previously refractory cases—should not restrict its use, exclusively or even primarily, to the more “difficult” patient. Actually, reactions to temporary or environmental stress can often be alleviated with a prescription for Librium. Many disturbances of gastrointestinal or cardiovascular function contain emotional components strikingly amenable to Librium therapy. So do certain gynecologic and dermatologic conditions. You will find new Librium 5 mg particularly suitable for this type of treatment. Librium 5 mg is also recommended for children and geriatric patients, in the presence of debilitating disease, and wherever a more flexible dosage schedule is desirable.



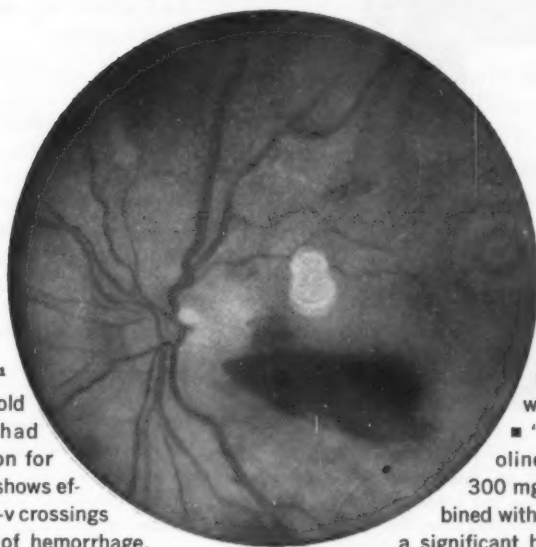
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1. Bedell, A. J.: Clin. Symposia 9:135 (Sept.-Oct.) 1957.
2. Lee, R. E., Seligman, A. M., Goebel, D., Fulton, L. A., and Clark, M. A.: Ann. Int. Med. 44:456 (March) 1956.

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SUMMIT, N. J.

"comprehensive" multivitamins—friend or foe?



Although not itself harmful, the small amounts of folic acid in "comprehensive" multivitamins can correct significant blood disorders to confuse the diagnosis and delay the treatment of pernicious anemia victims.¹⁻¹² Peripheral blood and bone marrow data may appear normal¹ in such patients while accompanying nerve degeneration continues. Diagnosis delayed by normal appearing indices can thus allow irreparable neurologic damage to occur before the true nature of the disease is recognized and treatment begun.⁴

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why no vitamin B₁₂ in Adabee®?

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| Zinc | 1.5 mg. |
| Potassium | 5.0 mg. |
| Calcium | 103.0 mg. |
| Phosphorus | 80.0 mg. |

references:

1. Ellison, A. B. C., J.A.M.A., 173:240, 1960.
2. White, P. L., Sec'y, A.M.A. Council on Foods and Nutrition, J.A.M.A., 169:41, 1959.
3. New Eng. J. M., Vol. 259, No. 25, Dec. 18, 1958, p. 1231.
4. Goodman, L. S., and Gilman, A., *The Pharmacological Basis of Therapeutics*, 2nd ed., New York, Macmillan, 1955, pp. 1709-10, 1489-91.
5. *Federal Register*, Vol. 25, No. 126, July 14, 1960, p. 6633.
6. Conley, C. L., and Krevans, J. R., New Eng. J. M., 245:529-31, 1951.
7. Wintrobe, M. M., *Clinical Hematology*, 3rd ed., Phila., Lea & Febiger, 1952, pp. 398-400.
8. Frohlich, E. D., New Eng. J. M., 259:1221, 1958.
9. Vilter, R. W., *Modern Medicine*, 28:15, p. 90, Aug. 1960.
10. Best, W. B., *Drugs of Choice: 1960-61*, W. Modell, ed., St. Louis, C. V. Mosby Co., 1960, pp. 115-16.
11. Crosby, W. H., Col., M.C., U.S.A., *Military Medicine*, 125:233, April, 1960.
12. Harris, C. E. C., Conn. State Med. J., pp. 543-45, July 1958.
13. Todd, Sanford, and Wells, *Clinical Diagnosis By Laboratory Methods*, 12th ed., W. B. Saunders, Phila., 1954, pp. 306-7.
14. Goldsmith, C. A., Am. J. of M., 25:589, Nov. 1955.
15. Derby, W. J., Am. J. of M., 25:726, Nov. 1958.
16. *GP*, Vol. XVIII, No. 2, p. 119, Aug. 1958.
17. J.A.M.A., Vol. 173, No. 16, pp. 1831-32, 1960.

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BPA

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The Christmas spirit invades Dr. Jones' waiting room with the result that the good doctor finds himself confronted with a delicate job. The trick, of course, is to get the ornaments on the tree without breaking too many of them. His aide wanted to trim the tree, but she doesn't have his patience or artistic eye. Besides, when patients compliment him on the decorations, he can proudly say, "Trimmed the tree myself." Painting by Stevan Dohanos. For a gallery of 1960 MT covers see page 196a.

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*Paul, W. D.: Rehabilitation in Rheumatoid Arthritis, South. M. J. 53:492 (April) 1960.



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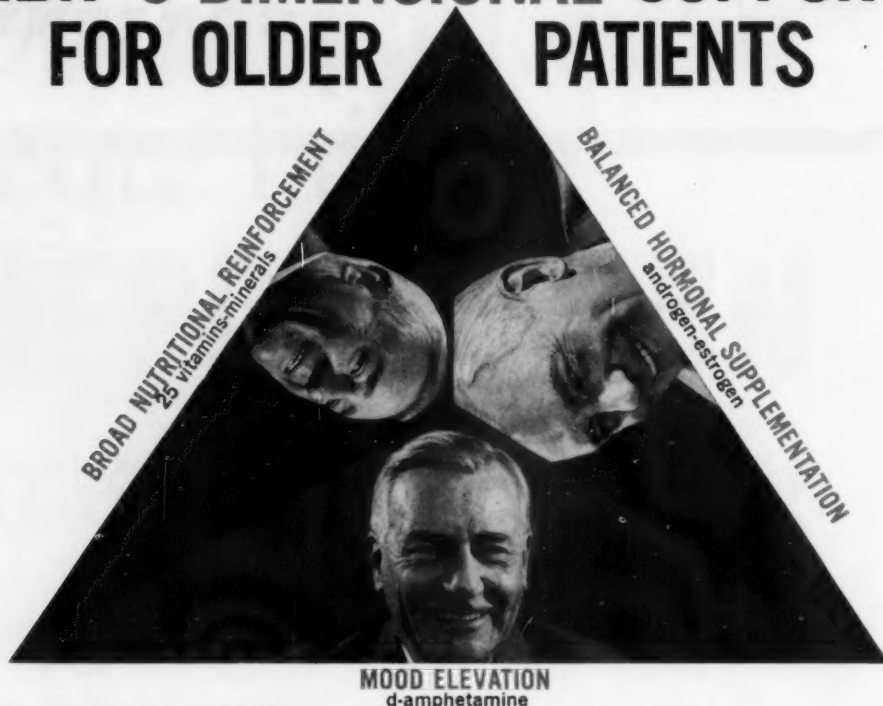


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REFERENCES:

1. Scherbel, A. L.; Schuchter, S. L., and Harrison, J. W.: *Cleveland Clin. Quart.* 24:98, April, 1957.
2. Waine, Hans: *Arthritis, rheumatoid*, in Conn, H. F.: *Current Therapy* 1959, Philadelphia, W. B. Saunders Co., 1959, p. 565.

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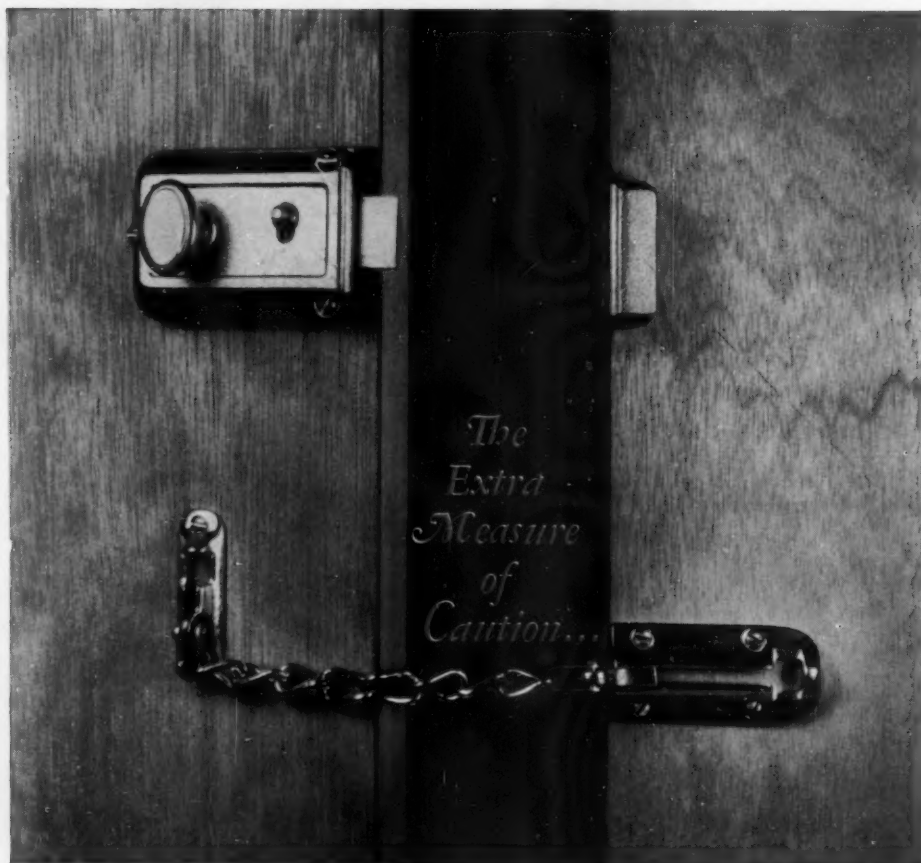
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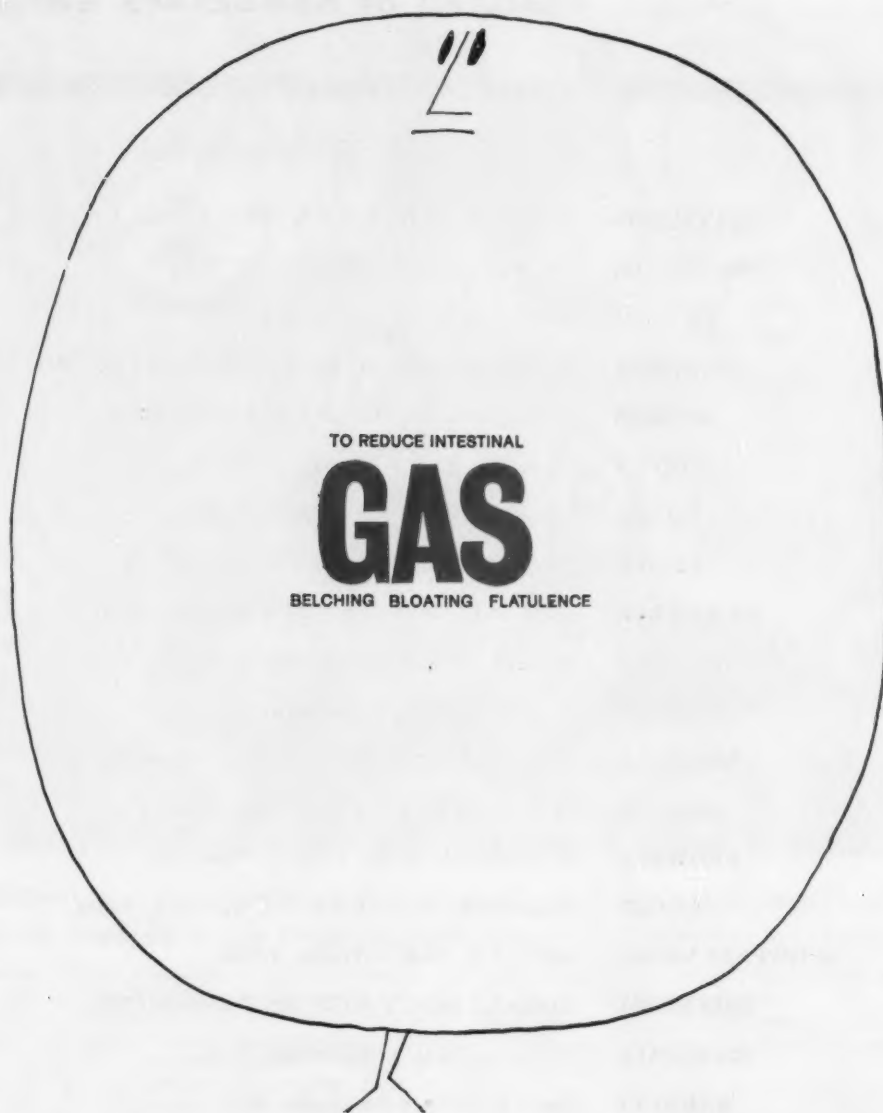
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caloric output

you can change it to this:



caloric intake



caloric output

in obesity
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1. Cornely, D. A., and Ritter, J. A.: N-acetyl-p-aminophenol (Tylenol Elixir) as a Pediatric Antipyretic-Analgesic. J.A.M.A. 160-1219 (Apr. 7) 1956

2. Mintz, A. A.: Management of the Febrile Child, J. Ky. Acad. Gen. Pract. 5:26 (Jan.) 1959.



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and
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failure

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lowers blood pressure
drains excess water
calms apprehension

Created especially for those patients whose emotional condition complicates the treatment of hypertension and congestive failure

Now the most widely prescribed diuretic-antihypertensive, hydrochlorothiazide, is combined with the most widely prescribed tranquilizer, meprobamate. Called "Miluretic", it constitutes new, effective therapy for hypertension and congestive failure—*especially when emotional factors complicate your treatment.*

What does Miluretic do? Both components are of proven value in hypertension. And in congestive failure, Miluretic induces smooth, continuous diuresis. Miluretic's

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Avoids side effects of other antihypertensive agents

Antihypertensive agents derived from Rauwolfia often cause reactions such as depression and nasal congestion; Miluretic does not.

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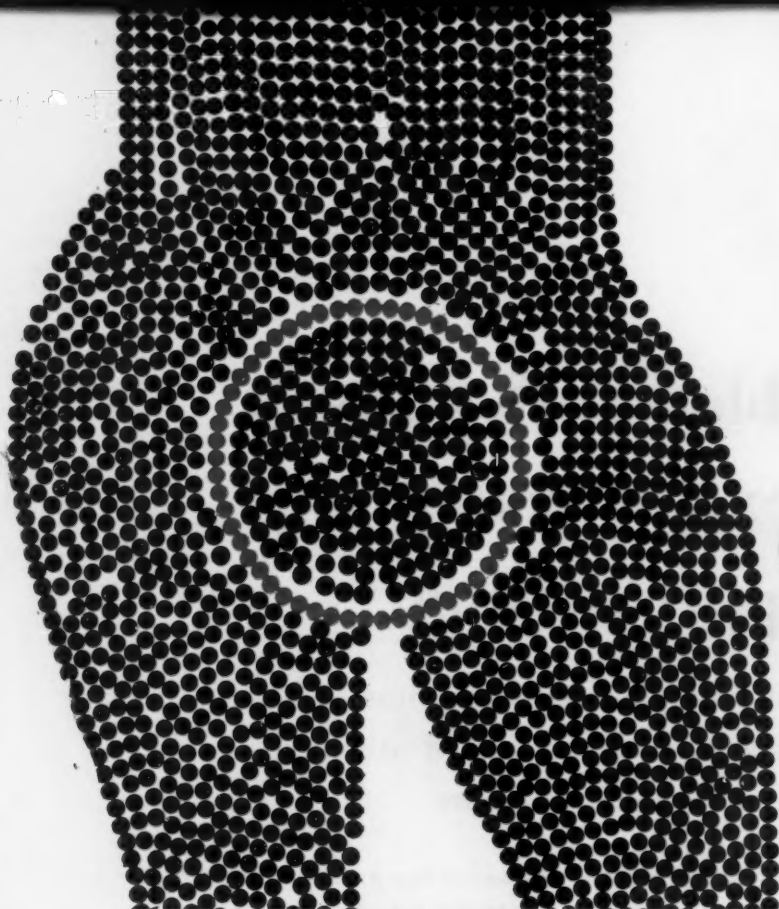
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*Available
at all
pharmacies*

Composition: 200 mg. Miltown (meprobamate, Wallace) + 25 mg. hydrochlorothiazide

Dosage: For hypertension, 1 tablet four times a day. For congestive failure, 2 tablets four times a day.

Supplied: Bottles of 50 white, scored tablets



CONSISTENT RESPONSE IN VAGINAL INFECTIONS

antibacterial, antimonilial, antitrichomonal effects—optimal dispersion, prolonged retention

85% success:^{1,2} Triburon Chloride—the clinically proven microbicide—provides rapid symptomatic relief as well as control of trichomonal, monilial and non-specific vaginitis. In one study,¹ discharge, itching and burning disappeared in 67 of 73 women after only 3 or 4 applications; after two weeks, cultures were negative in 61 patients. Similar results were noted in another series of 55 women.²

now available in two forms

New TRIB VAGINAL SUPPOSITORIES provide the efficacy of Triburon Chloride in a water-soluble, self-emulsifying base that enhances dispersion and prolongs therapeutic effects, even in the presence of profuse discharge. TRIB VAGINAL SUPPOSITORIES are provided with reusable plastic applicators.

Proven TRIBURON VAGINAL CREAM—white, nonstaining, virtually non-irritating to the vaginal mucosa, with no hint of medicinal odor. Disposable applicators are supplied with the cream.

Indications: TRIB VAGINAL SUPPOSITORIES and TRIBURON VAGINAL CREAM for vulvitis and vaginitis due to *Trichomonas vaginalis*, *Candida albicans*, *Haemophilus vaginalis* as well as mixed infections; after cauterization, conization and irradiation; for surgical and postpartum treatment. Therapy may be continued during pregnancy and menstruation.

Supplied: TRIB VAGINAL SUPPOSITORIES—Boxes of 24, with reusable applicator. TRIBURON VAGINAL CREAM—3-ounce tubes with 18 disposable applicators. Consult literature for dosage requirements, available on request, before prescribing.



References: 1. N. Mulla and J. J. McDonough, *Ann. New York Acad. Sc.*, 82: (Art. 1), 182, 1959. 2. L. E. Savel, D. B. Gershensfeld, J. Finkel and P. Drucker, *Ibid.*, p. 186.

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Vaginal Cream & Suppositories

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decisive microbiocidal therapy in a delicate matter
not an antibiotic • not a nitrofurantoin



Off the Record...

Contributions describing actual and unusual happenings in your practice are welcome. For obvious reasons only your initials will be published. An imported sculptulite figurine ... an amusing caricature of a physician ... will be sent in appreciation for each accepted contribution.

One for the Books

Though it may sound fantastic, this is a true story.

An LVN with an abundance of nature's blessings was doing her laundry. She was at the wringing stage when her right breast became caught in the wringer.

She opened her mouth to cry out in pain and her lower plate fell to the cement floor and broke. This only served to increase her excitement and straining. As a result her piles came down.

She was hospitalized and treated with ice bags on the breast and hot water bottles for the piles. The hot water bottles, it turned out, were too hot and the area was blistered, to add further to her misery.

But eventually the LVN got over all her troubles, and is now the proud owner of a new automatic washer.

Z. U. H., M.D.
Andrews, Tex.

A Good Patient

This is an experience I had when I was working in a gynecology clinic in Indianapolis. I examined the young woman who had a rather profuse trichomonas discharge, and prescribed a large triangular-shaped vaginal suppository.

Two weeks later she came in for the follow-up exam. I found that the discharge had markedly improved and expressed satisfaction. She agreed that the tablets really did the job, but

said they were absolutely the hardest ones she'd ever had to swallow.

R. W. N., M.D.
Evansville, Ind.

A True Texan

Not long ago I had a female patient with a fractured femur. The day after I had inserted a Jewitt nail into the fracture I saw the patient as I made hospital rounds.

She was worried and asked me, "Doctor, is it true that having a nail in my hip will give me arthritis when I get old?"

That was a rather difficult question for me to answer at the moment as I couldn't help laughing. The patient's age was 93!

J. W. M., M.D.
Nocona, Texas

Fluid Situation

When I was a senior in medical school my father was a busy general practitioner with a rural practice in the mountains of western North Carolina.

One time when I was home for a visit my father clearly showed me how important it is that the patient understand exactly the physician's instructions at the bedside. This was in the early days of sulfonamide therapy and he pointed out a young woman in his office whom he had seen back in the mountains two weeks before.

Concluded on page 29a



for every phase of cough...
comprehensive relief

AMBENYL[®] EXPECTORANT

AMBENYL EXPECTORANT quickly comforts the coughing patient because it is formulated to relieve all phases of cough due to upper respiratory infections or allergies. Combining Ambodryl[®]—potent antihistaminic; Benadryl[®]—the time-tested antihistaminic-antispasmodic; and three well-recognized antitussive agents, AMBENYL EXPECTORANT:

- soothes irritation • quiets the cough reflex
- decongests nasal mucosa • facilitates expectoration
- decreases bronchial spasm • and tastes good, too.

Each fluidounce of AMBENYL EXPECTORANT contains:

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| Ambodryl [®] hydrochloride | 24 mg. |
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| Benadryl [®] hydrochloride | 56 mg. |
| (diphenhydramine hydrochloride, Parke-Davis) | |
| Dihydrocodeinone bitartrate | ⅓ gr. |
| Ammonium chloride | 8 gr. |
| Potassium guaiacolsulfonate | 8 gr. |
| Menthol | q.s. |
| Alcohol | 5% |

Supplied: Bottles of 16 ounces and 1 gallon.

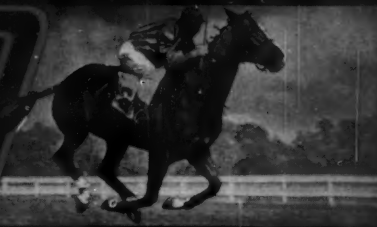
Dosage: Every three or four hours—adults, 1 to 2 teaspoonfuls; children ½ to 1 teaspoonful. 27166

⌘ Exempt narcotic

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IN ORAL CONTROL OF PAIN

ACTS FASTER—usually within 5-15 minutes. **LASTS LONGER**—usually 6 hours or more. **MORE THOROUGH RELIEF**—permits uninterrupted sleep through the night. **RARELY CONSTIPATES**—excellent for chronic or bedridden patients.

AVERAGE ADULT DOSE: 1 tablet every 6 hours. May be habit-forming. Federal law permits oral prescription.

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Literature? Write
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Percodan®

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FOR PAIN

My father had determined that she had a bilateral pneumonia and he informed her husband that in treatment with these new sulfa drugs it was urgent that the patient drink plenty of *fluids*, every drop he could get into her.

The husband returned to my father's office four days later stating that his wife's fever was better but he was sure she was going to die. He also stated that she wasn't going to continue the fluid treatment any longer.

My father visited the home immediately. He found the young patient surrounded by empty basins, some partially filled with urine and some with emesis.

I'm happy to say that this patient quickly learned there were other fluids to drink besides urine, and I'm certain that the first drop of clear mountain water was the most wonderful experience of her life.

A. N. M., M.D.
Marion, N. C.

Try Dissolving in Orange Juice

Early in my practice a young bride came to find out if there was anything she could use as a contraceptive. This was back in the early 1900's and suppositories were about the only thing you could prescribe.

Several days later the young innocent returned, looking somewhat out of sorts. "I can't eat those things," she said. "They taste terrible!"

Anonymous

Always Keep Calm

The following incident occurred shortly after I first joined a group of physicians. I was very anxious to please—and now I can candidly say that I don't know of any better way to lose a patient.

The patient had come in to see me about something in his eye. At this time our premises were very crowded, and the small "eye room" contained an EENT chair of ancient vintage in an extremely confined space.

I placed the patient in a prone position on the old chair by lowering the back of the chair. But whoever had used the chair before me had left it at so low a level that I was unable to work comfortably.

There was a baffling assortment of foot pedals and levers at the base of the chair. My nurse was helping me but I didn't want to let on to her that I didn't know which pedal did what. I selected a likely looking pedal to raise the chair and pushed with my foot. Nothing happened. I pushed harder, but still nothing happened. Annoyed, I put all my weight on the pedal.

The head of the old chair tilted suddenly and abruptly downward. The unsuspecting patient literally shot out over the head of the chair and crashed into the wall behind him.

I was mortified and not a little worried, but I thought my nurse would never stop laughing. Fortunately, the patient was not hurt.

I have never seen him since that day.

C. M. L., M.D.
North Bend, Ore.

New Medication

A young man came to my office complaining of a sore throat and hoarseness. He cleared his throat and said, "Doctor, I've had this for ten days. I've sucked three boxes of lingerie but it hasn't done any good."

G. A. B., M.D.
Riverside, Ill.

Emphatic Female

I was examining a middle-aged female with a long list of complaints. Sensing that an emotional problem was involved, I casually asked her how her husband was.

She snorted: "Huh—I could have gone to the cemetery and gotten a better man than he is!"

E. F. M., M.D.
Chattanooga, Tenn.

in edema or

- more doctors are prescribing —
- more patients are receiving the benefits of —
- more clinical evidence exists for —



in congestive failure

"Chlorothiazide was given to 16 patients for a total of 295 patient-treatment days." "Chlorothiazide is a safe, oral diuretic with a clinical effect equal to or greater than a parenteral mercurial." Harvey, S. D. and DeGraff, A. C.: N. Y. State J. Med., 59:1769, (May 1) 1959.



in hypertension

"... our program has been one of polypharmacy in which we attempt to deplete body sodium with chlorothiazide. This drug is continued indefinitely as background medication for all antihypertensive drugs." Moyer, J. H.: Am. J. Cardiology, 3:199, (Feb.) 1959.



in premenstrual edema

"Chlorothiazide is an excellent agent for relief of swelling and breast soreness associated with the premenstrual tension syndrome, since all patients [50] with these complaints were completely relieved." Keyes, J. W. and Berlacher, F. J.: J.A.M.A., 169:109, (Jan. 10) 1959.

DOSAGE: Edema—One or two 500 mg. tablets DIURIL once or twice a day. Hypertension—One 250 mg. tablet DIURIL twice a day to one 500 mg. tablet DIURIL three times a day.

SUPPLIED: 250 mg. and 500 mg. scored tablets DIURIL (chlorothiazide) in bottles of 100 and 1,000.

DIURIL is a trademark of Merck & Co., INC.

Additional information is available to the physician on request.

hypertension

DIURIL[®]

(CHLOROTHIAZIDE)

than for all other diuretic-antihypertensives combined!



in edema of pregnancy

"One hundred patients were treated with oral chlorothiazide." "In the presence of clinically detectable edema, the agent was universally effective." "Chlorothiazide is at present the most effective oral diuretic in pregnancy." Landesman, R., Ollstein, R. N. and Quinton, E. J.: N. Y. State J. Med., 59:66, (Jan. 1) 1959.



in cirrhosis with ascites

"All three of the patients with Laennec's cirrhosis, ascites and edema had a favorable response, with a mean weight loss of 8 lbs., during the five-day treatment period with a slight decrease in edema." Castle, C. N., Conrad, J. K. and Hecht, H. H.: Arch. Int. Med., 103:415, (March) 1959.



in renal edema

"In a study of 10 patients with the nephrotic syndrome associated with various types of renal disease, orally administered chlorothiazide was a successful, and sometimes dramatic, diuretic agent." Burch, G. E. and White, M. A., Jr.: Arch. Int. Med., 103:369, (March) 1959.



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After reaching peak action, ULO maintains its maximal cough-suppressant effect undiminished for 4 to 8 hours.

side actions **less than** narcotics

ULO is free from the limitations and undesirable side effects of narcotics... no constipation, no nausea, no gastric irritation, no appetite suppression, no tolerance development, no respiratory depression, no drowsiness.

Indications: Upper respiratory infections • Common cold • Influenza • Pneumonia
Bronchitis • Tracheitis • Laryngitis • Croup • Pertussis • Pleurisy

There are no known contraindications. Side effects occur only occasionally and are mild.

Dosage

Adults: One teaspoonful (25 mg.) 3 or 4 times daily as required.

Children: 6 to 12 years of age, $\frac{1}{2}$ to one teaspoonful (12.5 to 25 mg.) 3 or 4 times daily as required.

2 to 6 years of age, $\frac{1}{4}$ teaspoonful (12.5 mg.) 3 or 4 times daily as required.

Availability

ULO Syrup, 25 mg. per 5 cc. (teaspoonful), in bottles of 12 fluid ounces.



Northridge, California



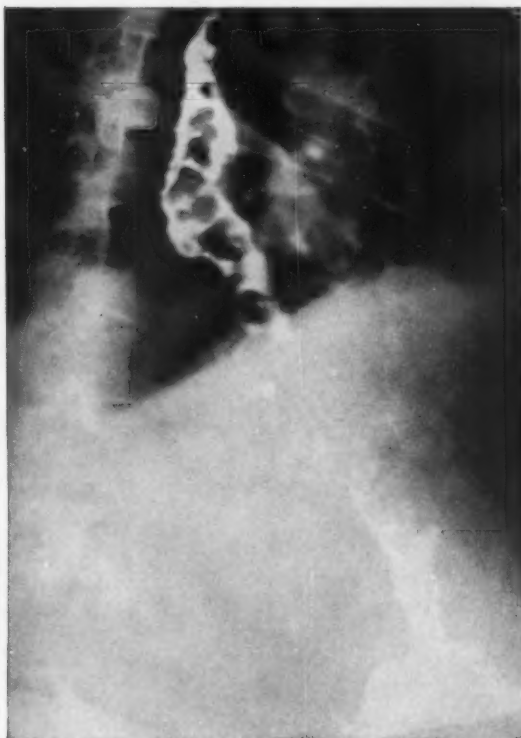
Diagnosis, Please!


Edited by Maxwell H. Poppel, M.D., F.A.C.R., Professor of Radiology
New York University College of Medicine
and Director of Radiology, Bellevue Hospital Center

Which Is Your Diagnosis?

1. Cancer of the esophagus
2. Curling of the esophagus
3. Varices

(Answer on page 194a)





*because
you
treat them
gently*

OTRIVIN[®]
ON PRESCRIPTION ONLY

*for gentle
relief
of stuffy
nose*

Otrivin relieves stuffy nose by
decongesting the engorged
mucosa, re-establishing
comfortable nasal airways.

Its action is not only
gentle but prompt and
prolonged, with little or no
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side effects. *Complete*

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Supplied: OTRIVIN Nasal Solution, 0.1%;
dropper bottles of 1 ounce.

OTRIVIN Pediatric Nasal Solution, 0.05%;
dropper bottles of 1 ounce.

OTRIVIN Nasal Spray, 0.1%;
plastic squeeze tubes of 15 ml.

OTRIVIN Pediatric Nasal Spray, 0.05%;
plastic squeeze tubes of 15 ml.

OTRIVIN[®] hydrochloride
(xylometazoline hydrochloride CIBA)

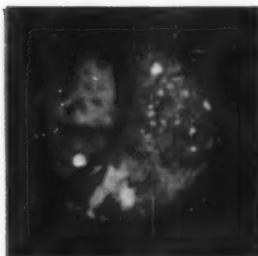
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SUMMIT, NEW JERSEY

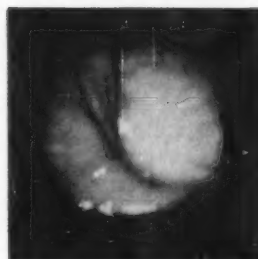
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Excellent results in ulcerative colitis even where other steroids have failed

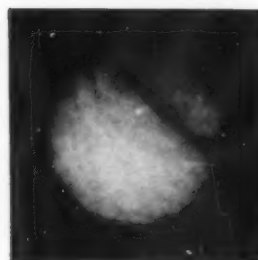
*Proctoscopic view
of the sigmoid
in acute stage
of ulcerative
colitis*



*Proctoscopic view
of the sigmoid
following
Depo-Medrol
retention enemas
for acute stage
of ulcerative
colitis*



*Proctoscopic view
of sigmoid colon
in a normal person*



In controlling ulcerative colitis (recurrent, moderately severe, severe, and resistant), Depo-Medrol* can be given topically (by enema or rectal instillation) in requisitely large doses without producing significant side effects. Excellent results are obtainable even where other steroids have failed and improvement continues on oral Medrol maintenance dosage.

**there is only one
methylprednisolone,
and that is**

Medrol*

**the corticosteroid
that hits the disease,
but spares the patient**



Medrol is supplied as 4 mg. tablets in bottles of 30, 100 and 500; as 2 mg. tablets in bottles of 30 and 100; and as 16 mg. tablets in bottles of 50. Depo-Medrol is supplied as 40 mg. per cc. injectable suspension in 1 cc. and 5 cc. vials. Mode of administration: Depo-Medrol (40-120 mg.) given as retention enema or by continuous drip three to seven times weekly.

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**In the
school-age child...**

**when
learning
lags behind
intelligence
and
behavior
problems
disturb
the family**



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Tablets containing 100 mg. deanol as the acetamidobenzoate

The most frequently reported observations are improvement in social adaptation and scholastic performance, lengthening of attention span, and decrease in overactivity and irritability.

Deanol is a normal component of the brain of man.

Deaner-100 is virtually free from side-actions. It is not an MAO inhibitor. The only contraindication is grand mal epilepsy and mixed epilepsy with grand mal component.

Literature and file card on request

Riker Northridge, California

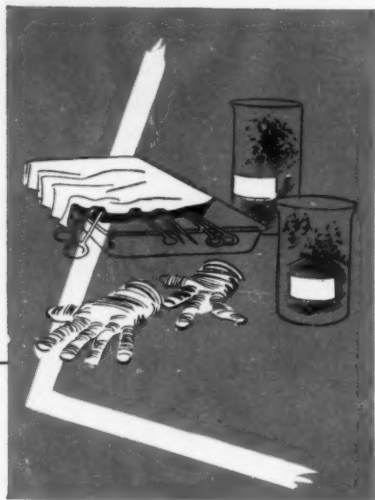
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contact allergy? in any case, for
allergic symptoms, the most widely used
antihistamine is **CHLOR-TRIMETON**®

chlorpheniramine maleate

wool?





Coroner's Corner

A beautiful imported German apothecary jar will be sent to each contributor of an unusual case report.

The county attorney and the family of the deceased were sure of foul play. A 23-year-old white male had been found dead in a room in a second-class hotel. The door and windows were securely locked from the inside.

The dead man was a newly arrived construction worker who last had been seen 48 hours previously in several taverns with characters of shady reputation.

There were no signs of violence. The room contained several empty bottles of soft orange drink and numerous candy bar wrappers.

Despite insistence by the deceased's family that he had "never been sick a day in his life," among his effects was an almost full bottle of capsules prescribed by a physician in another part of the state.

The gross autopsy revealed no significant abnormalities. The only remarkable microscopic finding was glycogen infiltration of the nuclei of the liver (owl's eye nuclei), the *sine qua non* of hyperglycemia. After negative tox-



cology, this lead was followed up with a phone call to the physician who had prescribed the medicine found in the room.

The physician said that four weeks previously tests of the patient had demonstrated a 4+ glycosuria and positive acetone. The young man had refused treatment.

TOM S. GAFFORD JR., M.D.
Muskogee, Oklahoma

UNSURPASSED "GENERAL-PURPOSE" CORTICOSTEROID...

Aristocort[®]
Triamcinolone LEDERLE

OUTSTANDING FOR "SPECIAL-PURPOSE" THERAPY



ARTISTOCCHI

Aristocort⁰

Triamcinolone has long since proved its unsurpassed efficacy and relative safety in the therapy of *rheumatoid arthritis, inflammatory and allergic dermatoses, bronchial asthma*, and all other conditions in which corticosteroids are indicated. But ARISTOCORT has also opened up new areas of therapy for selected patients who otherwise could not be given corticosteroids. Medicine is now in an era of "special-purpose" steroids.¹

One outstanding advantage of triamcinolone is that it rarely produces edema and sodium retention.^{1,2}

The clinical importance of this property cannot be overemphasized in treating certain types of patients. McGavack and associates³ have reported the beneficial results with ARISTOCORT in patients with existing or impending cardiac failure, and those with obesity associated with lymphedema. Triamcinolone, in contrast to most other steroids, is not contraindicated in the presence of edema or impending cardiac decompensation.³

Hollander¹ points out the superiority of triamcinolone in not causing mental stimulation, increased appetite and weight gain, compared to other steroids which produce these effects in varying

degrees. And McGavack,² in a comparative tabulation of steroid side effects, indicates that triamcinolone does not produce the increased appetite, insomnia, and psychic disturbances associated with other newer steroids.

ARISTOCORT can thus be advantageous for patients requiring corticosteroids whose appetites should not be stimulated, and for those who are already overweight or should not gain weight. Likewise, ARISTOCORT is suitable for the many patients with emotional and nervous disorders who should not be subjected to psychic stimulation. Furthermore, ARISTOCORT Triamcinolone, in effective doses, showed a low incidence of side reactions and is a steroid of choice for treating the older patient in whom salt and water retention may cause serious damage.²

References: 1. Hollander, J. L.: *J.A.M.A.* 172:306 (Jan. 23) 1960. 2. McGavack, T. H.: *Nebraska M. J.* 44:377 (Aug.) 1959. 3. McGavack, T. H.; Kao, K. Y. T.; Leake, D. A.; Bauer, H. G., and Berger, H. E.: *Am. J. M. Sc.* 236:720 (Dec.) 1958.

Precautions: Collateral hormonal effects generally associated with corticosteroids may be induced. These include Cushingoid manifestations and muscle weakness. However, sodium and potassium retention, edema, weight gain, psychic aberration and hypertension are exceedingly rare. Dosage should be individualized and kept at the lowest level needed to control symptoms. It should not exceed 36 mg. daily without potassium supplementation. Drug should not be withdrawn abruptly. Contraindicated in herpes simplex and chicken pox.

Supplied: Scored tablets—1 mg. (yellow); 2 mg. (pink); 4 mg. (white); 16 mg. (white).



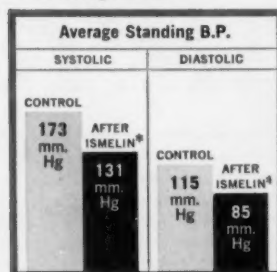
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ISMELIN® reduces high blood pressure to

According to reports from more than 100 clinical investigators, Ismelin—in moderate to severe hypertension—reduces blood pressure levels to normal or near-normal in a remarkably high percentage of patients. Following are summaries of typical findings:

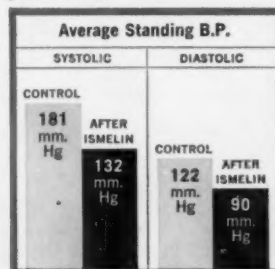
17 of 18 patients (94.4%) treated with Ismelin become normotensive in the erect position. Page and Dustan¹ gave Ismelin orally, alone or in combination with other antihypertensive drugs, to 18 patients daily for 2 to 10 weeks.

RESULTS: All 18 patients had reductions in standing blood pressure; 16 had moderate reductions in supine blood pressure as well. In 17 of the 18 cases, blood pressure levels became normal or near-normal in the erect position.



*During last week of treatment.

In 14 of 15 patients (93.3%) on Ismelin, blood pressure reduced to normal or near-normal levels in the standing position. Ismelin was administered orally by Frohlich and Freis² for 4 to 9 weeks to 15 male patients selected from the hypertensive clinic.

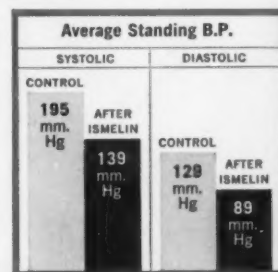


RESULTS: Ismelin evoked a potent antihypertensive response in the erect position: the blood pressure of 14 of the 15 patients dropped to normotensive or near-normotensive levels.

"The response [to Ismelin] was

characterized by a potent, orthostatic, antihypertensive effect similar to that seen with the ganglionic blocking drugs but without the side-effects of parasympathetic blockade."²

In 15 of 18 subjects (83.3%), guanethidine [Ismelin] reduced high blood pressure to near-normotensive levels. Guanethidine [Ismelin] was administered orally by Richardson and Wyso³ to 18 male hospitalized patients with hypertension.

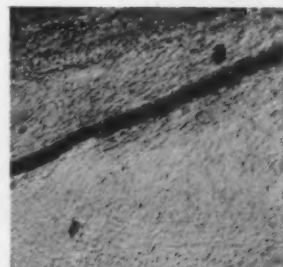


References: 1. Page, I. M., and Dustan, H. P.: J.A.M.A. 170:1265 (July 11) 1959. 2. Frohlich, E. D., and Freis, E. D.: M. Ann. District of Columbia 28:419 (Aug.) 1959. 3. Richardson, D. W., and Wyso, E. M.: Virginia M. Month. 86:377 (July) 1959. 4. Brest, A. N., and Moyer, J. H.: J.A.M.A. 172:1041 (March 5) 1960. 5. Page, I. H.: Postgrad. Med. 27:448 (April) 1960. 6. Kirkendall, W. M., Fitz, A. M., Van Hecke, D. C., Wilson, W. R., and Armstrong, M. L.: Paper presented at a Symposium on Guanethidine (Ismelin), The University of Tennessee College of Medicine, Memphis, Tenn., April 22, 1960. 7. Leishman, A. W. D., Matthews, H. L., and Smith, A. J.: Lancet 2:1044 (Dec. 12) 1959. Additional References: 8. Brest, A. N., Duarte, C., Glantz, G., and Moyer, J. H.: Current Therap. Res. 2:17 (Jan.) 1960. 9. Maxwell, R. A., Mull, R. P., and Plummer, A. J.: Experientia 15:267 (July 15) 1959. 10. Maxwell, R. A., Plummer, A. J., Schneider, F., Fovalski, H., and Daniel, A. I.: J. Pharmacol. & Exper. Therap. 128:22 (Jan.) 1960. 11. Maxwell, R. A., Plummer, A. J., Schneider, F., Fovalski, H., and Daniel, A. I.: Pharmacologist 1:66 (Fall) 1959. 12. Sheppard, H., and Zimmerman, J.: Pharmacologist 1:69 (Fall) 1959.

near-normal levels in 80 to 90% of cases^{1,3}

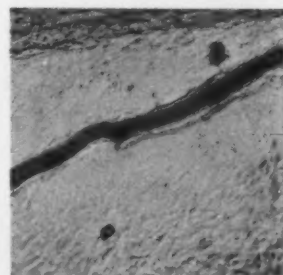
RESULTS: "All patients showed definite reduction in blood pressure coincident with administration of [Ismelin]. In most of the subjects [15] standing blood pressure could be maintained near normal levels."³

"Side-effects encountered... have indeed been minimal..."⁴ Brest and Moyer⁴ state: "Side-effects [of Ismelin] encountered to date have indeed been minimal, with mild diarrhea as the only significant complaint even when large daily doses (450 mg.) of the drug are administered. No evidence of toxic action of the drug has been encountered thus far." Page⁵ observes: "...Guanethidine [Ismelin] has the advantage [over ganglionic blockers] in that it is much easier to handle and does not produce nearly as much dose sensitivity. Too much of a ganglion-blocking agent will really 'clobber' the patient; with Guanethidine, there is much more leeway." Kirkendall and co-workers⁶ report: "Guanethidine has remarkably few side effects. The absence of symptoms of parasympathetic blockade makes its use better tolerated by most patients than conventional ganglion blocking therapy." Leishman and associates⁷ conclude: "The capacity of guanethidine to reduce the blood-pressure of hypertensive patients



**Ismelin
Increases Arteriole Caliber**
Ismelin represents a new principle in the treatment of high blood pressure: It acts at the nerve-arteriole junction where it apparently opposes the release and/or distribution of the pressor substance, norepinephrine. Ismelin is not a ganglionic blocker.

◀ **BEFORE ISMELIN:** Photo shows normal arteriole in rat mesentery. (100x)



◀ **AFTER ISMELIN:** Ismelin has blocked the constricting influence of norepinephrine. Arteriolar caliber has significantly increased, while an adjacent capillary has filled. (100x)

Because it acts at the nerve-arteriole junction—with no demonstrable central or ganglion blocking effect—Ismelin produces a clear-cut antihypertensive response in a high percentage of cases.

without symptoms of parasympathetic blockade is consistent with a mechanism of selective sympathetic-nerve inhibition..."

For complete information on precautions, dosage, and side effects, write to Medical Service Division, CIBA, Summit, New Jersey.

Supplied: ISMELIN Tablets, 10 mg. (yellow, scored) and 25 mg. (white, scored); bottles of 100.

ISMELIN® sulfate (guanethidine sulfate CIBA)

ISMELIN



C I B A
Summit, New Jersey

Therapeutic vitamins in the "therapeutic" jar

High potency water-soluble vitamins as contained in STRESSCAPS may solve the complicating nutritional problem in arthritics. As increased metabolic needs are intensified by established or progressive deficiencies, multiple vitamins adjunctive to primary therapy are justified.^{1,2} The decorative STRESSCAPS jar also helps resolve the problem of adherence to prescribed regimen... reminding the patient of his one-capsule-daily.

Each capsule contains: Thiamine Mononitrate (B₁) 10 mg., Riboflavin (B₂) 10 mg., Niacinamide 100 mg., Ascorbic Acid (C) 300 mg., Pyridoxine HCl (B₆) 2 mg., Vitamin B₁₂ 4 mcgm., Calcium Pantothenate 20 mg., Vitamin K (Menadione) 2 mg. Average dose: 1-2 capsules daily.

1. Robinson, W. D. Report to A.M.A. Council on Foods and Nutrition, J.A.M.A. 168:258 (Jan. 16) 1956. 2. Spies, T.D.: J.A.M.A. 167:675 (June 7) 1956.

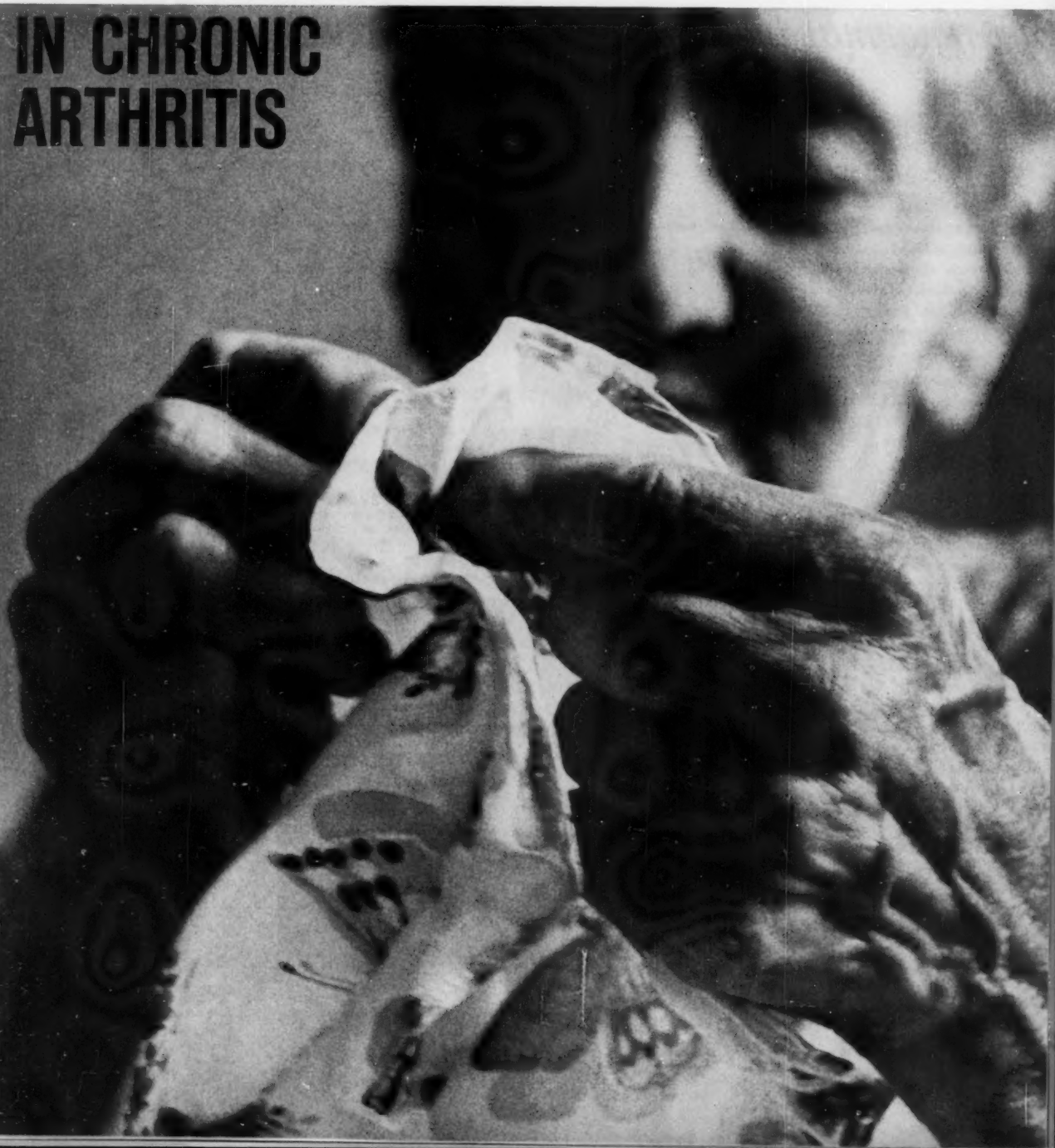
LEDERLE LABORATORIES, a Division of AMERICAN CYANAMID COMPANY, Pearl River, New York

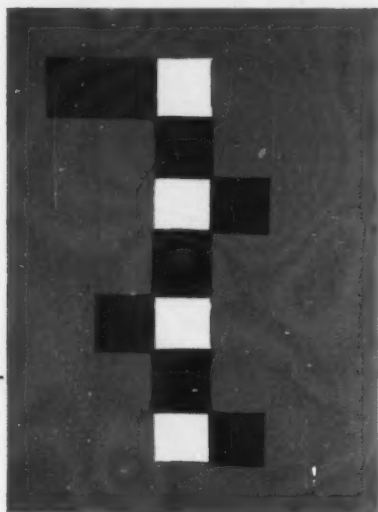
STRESSCAPS®

Stress Formula Vitamins Lederle



IN CHRONIC ARTHRITIS





Medical Teasers

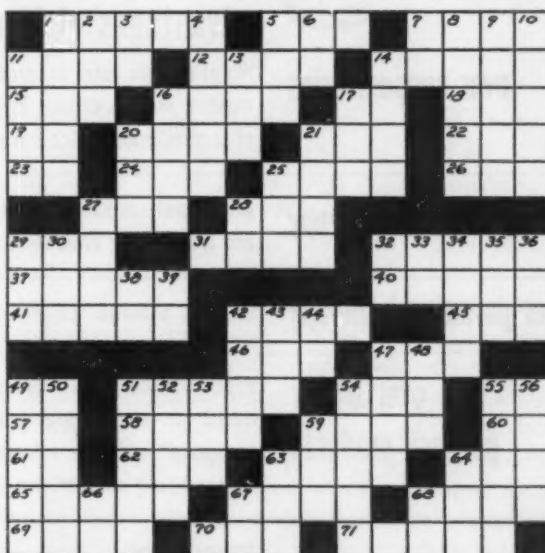
*A challenging crossword puzzle for the physician
(Solution on page 166a)*

ACROSS

1. Stage of a disease
5. Solution (Abbr.)
7. Powdered soapstone
11. Lower lateral nasal cartilage
12. Syringe
14. Metal mixture
15. Illness (Fr.)
16. Competent
17. Before meals (Lat. Abbr.)
18. N_2O is one
19. Old Tuberculin
20. Stop
21. A metal
22. —Iodoate, Poison Remedy
23. Concerning
24. In what manner
25. Crippled
26. Within (Comb. form)
27. Useful bean
28. Sheet of India rubber
29. Also
31. Crumb (Lat.)
32. Pertaining to part of the pelvis
37. Pertaining to birds
40. Skin
41. Abnormal respiratory sounds
42. Amount of medicine
45. Cereal
46. Thoracic bone
47. Homo Sapiens
49. Blood pressure
50. Pertaining to the nose
54. Baglike organ
55. Celium (Symb.)
58. Cheese
59. Sing gayly
60. Atop
61. Like
62. Fetal position: abbr.
63. Without (Lat.)
64. —Pecia, Baldness
65. Bennett's fracture
67. Sodium Bicarbonate
68. Implement
69. Distant (Prefix)
70. Salt
71. Citrus Fruit

DOWN

1. Flattened surface
2. Man's name
3. Argon (Sym.)
4. Joint
5. Perceive
6. Conjunction
7. Thalium (Sym.)
8. Seaweed (Pl.)
9. Lends
10. —Scopy, bladder examination
11. Love
13. Gingiva
14. Inflammatory disease of the sebaceous glands
16. Nautical hello
17. Direct
20. Health Organization of the U. N.
21. Swelling of the feet and legs
25. Milklike medicine
27. Defile
28. Twice (Prefix)
29. Coal derivative used in ointments
30. Eggs
32. The True Unconscious (Freud)
33. Article (Fr.)
34. Anti-Anemia factor
35. Medical society
36. Animal used in bio-assay of digitalis
38. Antitoxic unit (German)
39. Q. — not enough (Lat.)
42. Apothecaries' unit of weight
43. Liquid fat
44. Tin (Sym.)
47. Producer of spermatozoa
48. Deed
49. Nucleated erythrocyte
50. Soft viscid substance
51. Transmitter of impulses
52. Add (Latin)
53. Natural juice of a living structure
54. Pertaining to a cavity
55. Part of the intestine
56. Tautomeric form
59. Top
63. Liquid colloid solution
64. Anodal opening odor (Abbr.)
66. Aluminum (Sym.)
67. According to art (Latin)
68. Temporomandibular (Abbr.)





new, low-dosage

FLEET® THEOPHYLLINE RECTAL UNIT

provides therapeutic blood levels in bronchial or cardiac asthma with reduced side effects

over suppositories

advantages of Fleet Theophylline Rectal Unit

Water-soluble form assures more uniform absorption over a wider mucosal area... without irritation. Avoids slow and erratic absorption of suppositories, which are especially hazardous in children.^{1,2}

over oral therapy

Avoids oral xanthine side effects (gastric irritation, nausea, vomiting)³ and loss of drug effectiveness through hepatic metabolism.⁴

over parenteral therapy

Obviates potential danger and inconvenience of xanthine injection.¹

over higher potency products

Recent clinical work indicates that "the amounts of theophylline required for relief of bronchospasm are lower than previously thought necessary" and side effects are decidedly reduced with the lower dosage.⁵ Early studies⁶ also demonstrate rapidity and duration of relief.

ADMINISTRATION: Usual dose—contents of a single unit as often as the physician may direct. FLEET® THEOPHYLLINE Rectal Unit contains 0.3125 Gm. theophylline monoethanolamine in 37 ml. aqueous solution, delivering 0.250 Gm., a 3¾-gr. dose.

AVAILABILITY: FLEET® THEOPHYLLINE Rectal Unit is supplied in a prescription package of 6 individual ready-to-use units. Also available for patients requiring greater concentrations: CLYSMATHANE® Disposable Rectal Unit containing 0.625 Gm. theophylline monoethanolamine in prescription package of 6 individual ready-to-use units. This product delivers 0.5 Gm., a 7½-gr. dose.

1. Ridolfo, A. S., and Kohlstedt, K. G.: *Am. J. M. Sc.* 237:585, May, 1959. 2. Holke, A. C.: *J. A. M. A.* 161:693, June 23, 1956. 3. Goodman, L. S., and Gilman, A.: *The Pharmacological Basis of Therapeutics*, ed. 2, New York, Macmillan, 1955, p. 349. 4. Blumenthal, L. S., and Fuchs, M.: *Am. J. Gastroenterol.* 33:189, Feb., 1960. 5. Prince, H. E.; Jackson, R. H.; Etter, R. L.; Raymer, W. J., and Moreland, F. B.: *Theophylline Blood Level Studies Following the Rectal Administration of Theophylline Monoethanolamine*, to be published. 6. Jackson, R. H.; Prince, H. E., and McGivney, F.: *Ann. Allergy* 18:620, June, 1960.

Complete information on request.



C. B. FLEET CO., INC. Lynchburg, Virginia



What's Your Verdict?

Edited by Ann Ledakowich, Member of the Bar of New Jersey

The patient, suffering from a cancerous tumor in her breast, had a radical left mastectomy performed. Pathological examination of the tissue removed did not disclose any spread of the cancer cells into the lymphatics beyond the cancerous tumor itself. But an ulcer, about the size of a quarter, remained under the patient's left arm and did not stop draining. Her surgeon advised her that as a precautionary measure she should receive the cobalt treatment. He explained that the cobalt was a new therapy and much more powerful than the x-ray.

At the hospital, the patient was met by the head radiologist and a discussion was had as to the treatment, the length of time it would take, and the number of areas to be irradiated.

The radiologist ordered the administration of cobalt irradiation in routine fashion. This meant a tumor dosage of 4,400 roentgen delivered to the supraclavicular area in a period of sixteen days, and a dosage of 4,800 roentgen delivered over the outer two centimeters of the remainder of the left chest in a period of twenty-three days. The treatment was to be given by means of a rotating beam with the assistance of a physicist.

In calculating the tumor doses (one and one-half to two centimeters deep), the physicist neglected to calculate the equilibrium

doses (five centimeters deep) which, when administered at several segments of the chest wall, were from 5,670 roentgen to 6,280 roentgen. The entire chest, skin, cartilage and bone were completely destroyed in those areas.

In a malpractice action against him, the radiologist testified that the prescribed dosage of 4,400 roentgen was intended as the minimum dosage to be administered to be effective. Portions of the chest would receive a much higher dosage. A doctor must assume risks in the treatment of cancer despite danger of injury from such treatment. These risks are determined to a large extent by the tolerance of the individual concerned, some patients having a much higher tolerance than others.

The patient's attorney contended that the radiologist was negligent, among other respects, in failing to advise his patient that his proposed treatment involved great risk of bodily injury or death. Every adult person has the right to determine for himself whether or not he will subject his body to the hazards of any particular medical treatment. The attorney requested the court to so instruct the jury, but it refused to do so.

On an appeal from a judgment for the physician, how would you decide?

Answer on page 194a.

**resistant
staphylococci
among
outpatients
emerge
less
frequently...
disappear
more
readily**

CHLOROMYCETIN®

chloramphenicol, Parke-Davis

"Resistance to chloramphenicol was surprisingly infrequent (0-5%)" among strains of staphylococci isolated from outpatients over a 5-year period. It was impressive to note that less than 6% of 310 strains isolated from patients treated in the emergency room were resistant to CHLOROMYCETIN. Moreover, it would appear "...that chloramphenicol-resistant staphylococci disappear more readily after leaving the hospital environment."¹

Goslings and Büchli² report that "...resistance was lost entirely after 3 months..." in the small percentage of patients who carried staphylococcal strains resistant to CHLOROMYCETIN. Numerous other investigators concur in the observation that staphylococcal resistance to CHLOROMYCETIN is of a low order.³⁻⁸

CHLOROMYCETIN (chloramphenicol, Parke-Davis) is available in various forms, including Kapseals® of 250 mg., in bottles of 16 and 100.

CHLOROMYCETIN is a potent therapeutic agent and, because certain blood dyscrasias have been associated with its administration, it should not be used indiscriminately or for minor infections. Furthermore, as with certain other drugs, adequate blood studies should be made when the patient requires prolonged or intermittent therapy.

References: (1) Bauer, A. W.; Perry, D. M., & Kirby, W. M. M.: *J.A.M.A.* 173:475, 1960. (2) Goslings, W. R. O., & Büchli, K.: *Arch. Int. Med.* 102:691, 1958. (3) Goodler, T. E. W., & Parry, W. R.: *Lancet* 1:356, 1959. (4) Fisher, M. W.: *Arch. Int. Med.* 105:413, 1960. (5) Petersdorf, R. G., et al.: *Arch. Int. Med.* 105:398, 1960. (6) Glas, W. W., in Symposium on Antibacterial Therapy, Michigan & Wayne County Acad. Gen. Pract., Detroit, September 12, 1959, p. 7. (7) Modarress, Y.; Ryan, R. J., & Francis, Sr. C. E.: *J. M. Soc. New Jersey* 57:168, 1960. (8) Rebhan, A. W., & Edwards, H. E.: *Canad. M. A. J.* 82:513, 1960.

IN VITRO SENSITIVITY OF COAGULASE-POSITIVE STAPHYLOCOCCI TO CHLOROMYCETIN FROM 1955 TO 1959*

| | |
|------|------|
| 1955 | 96% |
| 1956 | 100% |
| 1957 | 96% |
| 1958 | 95% |
| 1959 | 95% |

These sensitivity tests were done by the disc method on 310 strains of coagulase-positive staphylococci. Strains were isolated from patients seen in the emergency room. It should be noted that among inpatients, resistant strains were considerably more prevalent.

*Adapted from Bauer, Perry, & Kirby¹

10240

PARKE-DAVIS

PARKE, DAVIS & COMPANY • DETROIT 32, MICHIGAN



**The discomfort
following my
tonsillectomy
was almost
nonexistent.
I could eat
and swallow
without
feeling pain
because my
doctor gave me
Xylocaine...
whatever
that is!**


Xylocaine® Viscous topical anesthetic for oral administration

(brand of lidocaine*)

For almost immediate relief of pain and easier swallowing after T & A, Xylocaine Viscous spreads evenly and adheres to the membranes. Cherry flavored Xylocaine Viscous contains 2% Xylocaine hydrochloride; water miscible and of viscous consistency. Dose: 1 teaspoonful, swished around in the mouth, and then swallowed slowly. Astra Pharmaceutical Products, Inc., Worcester 6, Mass.

*U.S. Patent No. 2,441,498





no asthma symptoms

Tedral helps asthma patients breathe normally—live actively—avoid the fear and embarrassment of disabling attacks. 1 or 2 tablets q.4h. provide up to 4 hours' freedom from congestion and constriction of asthma.

TEDRAL[®]

the dependable antiasthmatic



TE-MD04

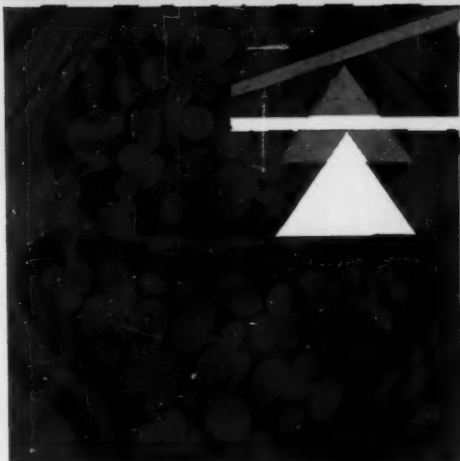
MORRIS PLAINS, N.J.

in rheumatic disorders

whenever aspirin
proves inadequate

Sterazolidin®

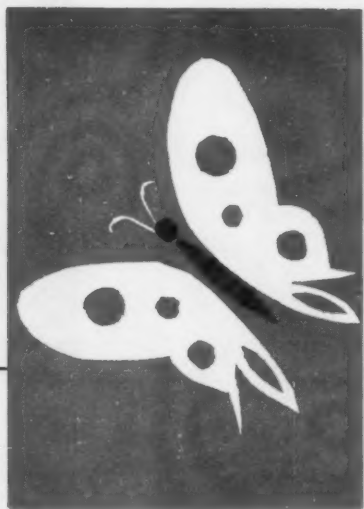
brand of prednisone-phenylbutazone



Improves on the combination of prednisone and phenylbutazone, Sterazolidin® is more effective than the combination of prednisone and aspirin in the treatment of rheumatic disorders. It is indicated for the treatment of rheumatic disorders when aspirin proves inadequate. Sterazolidin® is a combination of prednisone and phenylbutazone. It is indicated for the treatment of rheumatic disorders when aspirin proves inadequate. Sterazolidin® is a combination of prednisone and phenylbutazone. It is indicated for the treatment of rheumatic disorders when aspirin proves inadequate.

Geigy

165-60



AFTER HOURS

No man is really happy or safe without a hobby, and it makes precious little difference what the outside interest may be—botany, beetles or butterflies, roses, tulips or irises; fishing, mountaineering or antiques—anything will do so long as he straddles a hobby and rides it hard.—Sir William Osler

● Flying and woodworking are the chief hobbies of Dr. James S. Petty of Guthrie, Oklahoma. He is devoted to flying because of the "sheer thrill of being in the air." It's an expensive hobby, he admits, but "a few men can work it into their practices and thus help with expenses." He further observes that "there are no phones in an airplane. When the weather isn't good for flying there is always carpentry. Working in wood is satisfying because from it you can see the things you have made yourself."



● Dr. M. R. Jennings of Claremore, Oklahoma, has followed painting as a hobby for twenty years. Not only is this hobby excellent for relaxation, but it gives a sense of achievement and creation. "It is next to impossible to worry about medical problems while painting a picture," says Dr. Jennings.



another patient with hypertension?





*indicated
in all degrees
of hypertension*

*effective
by itself in most
hypertensives*

HYDROPRES

HYDRODIURIL® with RESERPINE
(HYDROCHLOROTHIAZIDE)

HYDROPRES can be used:

- ▶ *alone* (In most patients, HYDROPRES is the only antihypertensive medication needed.)
- ▶ *as basic therapy, adding other drugs if necessary* (Should other antihypertensive agents need to be added, they can be given in much lower than usual dosage so that their side effects are often strikingly reduced.)
- ▶ *as replacement therapy, in patients now treated with other drugs* (In patients treated with rauwolfia or its derivatives, HYDROPRES can produce a greater antihypertensive effect. Moreover, HYDROPRES is less likely to cause side effects characteristic of rauwolfia, since the required dosage of reserpine is usually less when given in combination with HydroDIURIL than when given alone.)

HYDROPRES-25

25 mg. HydroDIURIL, 0.125 mg. reserpine.
One tablet one to four times a day.

HYDROPRES-50

50 mg. HydroDIURIL, 0.125 mg. reserpine.
One tablet one or two times a day.

also available: HYDROPRES-Ka-50

50 mg. HydroDIURIL, 0.125 mg. reserpine, 572 mg. potassium chloride.
One tablet one or two times a day.

If the patient is receiving ganglion blocking drugs or hydralazine, their dosage must be cut in half when HYDROPRES is added.



For additional information, write Professional Services, Merck Sharp & Dohme, West Point, Pa.
MERCK SHARP & DOHME, DIVISION OF MERCK & CO., INC., WEST POINT, PA.

*HYDROPRES, HYDROPRES-Ka, AND HYDRODIURIL ARE TRADEMARKS OF MERCK & CO., INC.

DORIDEN: MORE SUITABLE FOR MORE
PATIENTS FOR MORE SATISFYING SLEEP



Doriden offers sound, restful sleep for patients who are sensitive to barbiturates, elderly patients, patients with low vital capacity and poor respiratory reserve and those who are unable to use barbiturates because of hepatic or renal disease. Onset of sleep with Doriden is smooth and gradual, usually with no preliminary excitation. Doriden acts within 30 minutes, and sleep lasts for 4 to 8 hours. Except in rare cases, no "hang-over" or "fog," because Doriden is rapidly metabolized. SUPPLIED: Tablets, 0.5 Gm., 0.25 Gm. and 0.125 Gm.

/CIBABA
Complete information sent on request. **DORIDEN**
(glutethimide CIBA)

CIBA
SUMMIT, N. J.

in comfort
wrapped in

DOXIDAN



LLOYD BROTHERS, INC.

CINCINNATI 3, OHIO



Effective against more than 30 of the commonly encountered pathogens, including **staph** and **strep**, Panalba KM assures you of prompt control in potentially-serious pediatric infections. Panalba KM makes a pleasant-tasting, readily accepted suspension.

When sufficient water is added to fill the bottle to a total volume of 40 cc. (or 60 cc.) and the contents shaken, each 5 cc. (one teaspoonful) contains:

Panmycin (tetracycline) equivalent to tetracycline hydrochloride 125 mg.
Albamylin (as novobiocin calcium) 62.5 mg.
Potassium Metaphosphate 100 mg.

Supplied: In 40 cc. and 60 cc. bottles.

*TRADEMARK, REG. U. S. PAT. OFF.

THE-UPJOHN COMPANY, KALAMAZOO, MICHIGAN

in potentially-
serious pediatric
infections,
make

Upjohn

Panalba
KM*Granules

PANMYCIN® PLUS ALBAMYCIN®
WITH POTASSIUM METAPHOSPHATE (KM)

your broad-spectrum
antibiotic
of first resort





Who Is This Doctor?

Identify the famous physician from clues in this brief biography

He was born in 1738, the son of a lawyer at Saintes, France. In 1763, he matriculated as a medical student in Paris and five years later was graduated in Rheims.

He received his official degree in medicine in Paris in 1770. Later, he was appointed a *docteur-regent* of the medical faculty — the highest distinction possible — and became a popular teacher and practitioner.

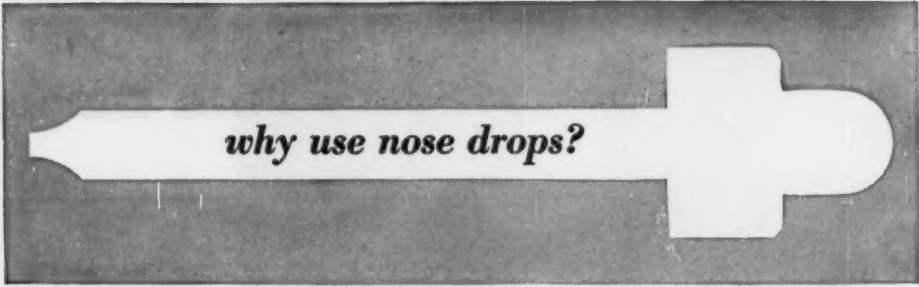
In 1784, he was chosen a member of the commission for the investigation of Mesmer's theory concerning animal magnetism. This commission, appointed by Louis XVI, included, among others, Lavoisier and Benjamin Franklin. The investigation was unfavorable for Mesmer, who was eventually forced to leave Paris.

In 1778, he published a pamphlet considered to be one of the political manifestos that helped to pave the way for the Revolution. It presented the claims of the commons for at least as many representatives in the States-General as were accorded the nobility and the clergy. As a result he was elected a people's representative for the city of Paris and became the president of the Assembly.

At that time he proposed that execution by decapitation should no longer be confined to the upper class and that it was desirable to render the process of execution as swift and painless as possible. He suggested a machine similar to those in many countries a century before. The machine was constructed by a German mechanic, and after satisfactory experiments, was erected on the Place de Greve for the execution of a highwayman in 1792.

After having carried several names, the machine was eventually given the name of the doctor who first suggested its use. He could not have foreseen that this mechanism would become the tool of destruction in a Reign of Terror.

Meanwhile, he retired from politics and tried to protect, wherever possible, the victims of the Revolution. He was finally arrested but was saved by the fall of Robespierre. After the Terror he founded the Academie de Medecine. He was an ardent follower of Jenner and headed a French committee for the propagation of vaccination. He died in 1814. Can you name him? See page 194a.



why use nose drops?

*'SUDAFED' acts systemically to relieve
stuffy noses . . . and dilate the bronchi.*

'SUDAFED'[®]
Pseudoephedrine Hydrochloride brand

○ ○ ○ ○ ○ ○ ○ **TABLETS** ○ ○ ○ ○ ○



and **SYRUP**

for nasal and respiratory decongestion

- Quick relief — 15 to 30 minutes
- Gentle, prolonged action — 4 to 6 hours
- Seldom causes central stimulation

Dosage: adults—60 mg., 3 or 4 times daily
children (4 mos. to 6 yrs.)—30 mg., 3 or 4 times daily
infants up to 4 mos. of age—15 mg., 3 or 4 times daily

Supply: 'SUDAFED' brand Pseudoephedrine Hydrochloride

Tablets—30 mg. sugar-coated, 60 mg. scored

Syrup—30 mg. per 5 cc. teaspoonful

Precaution: Although pseudoephedrine causes
virtually no pressor effect in normotensive patients,
it should be used with caution in hypertensives.

Complete literature available on request.



BURROUGHS WELLCOME & CO. (U.S.A.) INC., Tuckahoe, New York

THE TREATMENT OF YOUR CHOICE

*in arthritis
and related
disorders*



Three different combinations of prednisone, salicylates and buffers provide a choice of therapy to fit the individual needs of your patients, giving optimal relief of symptoms with minimal side effects.

For the acute, inflammatory stage

PREDSEM

Each white tablet contains:

Prednisone* 5 mg.
Calcium Pantothenate 10 mg.
Aluminum Hydroxide
Gel, dried 0.2 Gm.
Magnesium Trisilicate 0.1 Gm.

Antacids and calcium pantothenate guard against gastric distress and peptic ulcer.

For the sub-acute, severe phase

SALCORT®-DELTA

Each yellow tablet contains:

Prednisone* 1 mg.
Potassium Salicylate 0.3 Gm.
Calcium Pantothenate 5 mg.
Calcium Ascorbate 30 mg.
(Equiv. to 25 mg. Ascorbic Acid)
Calcium Carbonate 60 mg.
Aluminum Hydroxide
Gel, dried 0.12 Gm.

Potassium salicylate compensates for reduced prednisone dosage. Buffered with protective antacids; fortified with ascorbic acid and calcium pantothenate.

For long-term maintenance

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Gel, dried 0.12 Gm.
Calcium Ascorbate 60 mg.
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High salicylate dosage, buffered to prevent gastric disturbances.

*U.S. Pat. No. 2579479

Write for detailed literature and dosage schedules.

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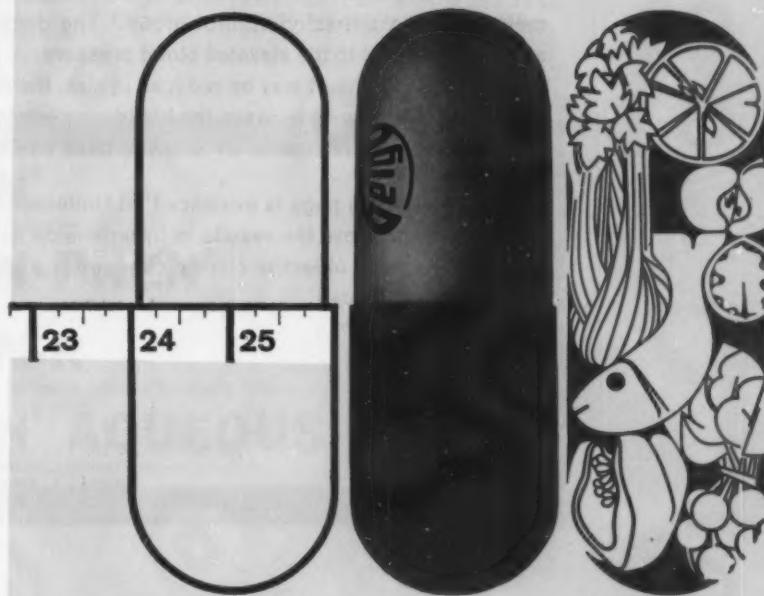
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Now, Prelu-Vite helps to fortify the patient's nutritional status and sense of well-being without jeopardizing the success of the weight-reducing program.

By improving nutritional status Prelu-Vite makes it easier for the patient to retain the initial zeal for reducing... facilitates the retention of enthusiastic cooperation in pursuing therapy to a successful conclusion.

With Prelu-Vite, as with Preludin, a weight loss 2-5 times that obtainable by dietary restriction alone, is readily achieved without the occurrence of annoying side reactions.



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Availability:

Prelu-Vite[®] Capsules, each containing 25 mg. of Preludin (brand of phenmetrazine HCl) with vitamins A, B, C and D and 5 minerals.

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Geigy, Ardsley, New York



321-60

INCREASED LIFE EXPECTANCY FOR HYPERTENSIVES

"Life expectancy seems to be the one criterion that is most reliable and least questioned as a method of evaluating treatment for patients with elevated blood pressure."¹ "It is evident that effective therapy of hypertension will prolong the life of the patient by preventing the dreaded complications of this disease in the brain, the heart and the kidneys." "There is no doubt of the prolongation of life in group 3 and 4 (Keith-Wagener-Barker) by adequate antihypertensive treatment. Some authorities report a 50 per cent, five year survival ratio for treated patients with malignant hypertension as against a 1 per cent survival ratio for untreated patients."²

Evaluation based on life expectancy is extremely difficult because of the peril of maintaining an untreated control group.¹ The doctor, however, can evaluate the symptoms related to the elevated blood pressure. . . . We know that retinopathy may improve, the heart may be reduced in size, the electrocardiogram may improve and in favorable cases the blood urea nitrogen level may fall.² These are reasonably objective criteria on which to base one's evaluation of treatment.¹

On the succeeding page is evidence that Unitensin included in any therapeutic regimen may improve the results in hypertension as measured by a regression of objective clinical changes in a substantial proportion of the patients treated.

1. Currens, J. H.: *New England J. Med.* 261:1062, 1959.
- Waldman, S., and Pelner, L.: *Am. Pract. & Digest. Treat.* 10:1139, 1959.
3. Cohen, B. M.: paper presented at A.M.A. Convention, June, 1958.
4. Cohen, B. M.: paper presented at Indiana Acad. G. P., March, 1959.
5. Cohen, B. M.: *Am. J. Cardiology* 1:748, 1958.
6. Kirkendall, W. J.: *J. Iowa M. Soc.* 47:300, 1957.
7. Cherny, W. B., *et al.*: *Obst. & Gynec.* 9:515, 1957.
8. Raber, P. A.: *Illinois M. J.* 108:171, 1955.
9. McCall, M. L., *et al.*: *Obst. & Gynec.* 6:297, 1955.
10. Finnerty, F. A.: *Am. J. Med.* 17:829, 1954.

Unlike diuretics or ganglionic blocking agents, Unitensen lowers blood pressure through widespread vasorelaxation. Normal vasomotor responses are not altered, and there is no venous pooling with resulting postural hypotension.³⁻⁵ Through alleviation of cerebral vasospasm, Unitensen promotes cerebral blood flow and oxygen utilization.⁶⁻⁹ Furthermore, Unitensen increases cardiac efficiency, improves renal function and tends to arrest the progress of vascular damage.^{3,4,10}

Progress of Objective and Subjective Symptoms in Grades III and IV Hypertension Following Treatment with Unitensen and Unitensen-R

Observations in Patients* Treated up to 2 Years

Observations in Patients* Treated up to 3½ Years

The Course of Subjective Symptoms

| Symptom | Number** | Improved | % Improved |
|-------------|----------|----------|------------|
| Headache | 27 | 21 | 77.7 |
| Palpitation | 20 | 13 | 65.0 |
| Angina | 15 | 9 | 60.0 |
| Dyspnea | 17 | 8 | 47.0 |

| Number** | Improved | % Improved |
|----------|----------|------------|
| 43 | 38 | 88.0 |
| 29 | 19 | 65.5 |
| 21 | 16 | 76.0 |
| 27 | 14 | 51.0 |

Objective Changes Following Treatment

| Finding | Number** | Improved | % Improved |
|--------------------|----------|----------|------------|
| Funduscopy Changes | 41 | 24 | 58.5 |
| Enlarged Heart | 20 | 13 | 65.0 |
| Abnormal ECG | 37 | 10 | 27.0 |
| Proteinuria | 31 | 12 | 38.7 |
| Nitrogen Retention | 17 | 6 | 35.2 |

| Number** | Improved | % Improved |
|----------|----------|------------|
| 59 | 38 | 66.0 |
| 35 | 23 | 65.7 |
| 45 | 25 | 55.5 |
| 43 | 27 | 62.7 |
| 28 | 10 | 35.7 |

Left hand charts from Clinical Exhibit "The Ambulatory Patient with Hypertension" presented AMA Convention, San Francisco, June 22-27, 1958, by B. M. Cohen, M.D.

*All patients in this study were initially classified as Smithwick Grades III and IV.

**Expressed as the number of patients exhibiting the symptom recorded.

Right hand charts include patients previously reported who had been continuously maintained on Unitensen and Unitensen-R, plus additional patients later added to the study. From Clinical Exhibit "The Office Diagnosis and Treatment of the Patient with Hypertension" presented American Academy of General Practice, Indianapolis, March 18-19, 1959, by B. M. Cohen, M.D.

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Each tablet contains: Cryptenamine (tannates) 2.0 mg.

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Each tablet contains: Cryptenamine (tannates) 1.0 mg., Phenobarbital 15 mg.

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Each tablet contains: Cryptenamine (tannates) 1.0 mg., Reserpine 0.1 mg.

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a new class of drug

for the relief of pain and muscle tension

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**KEEPS
THE STOMACH
FREE OF PAIN**

tranquilizer
**KEEPS
THE MIND OFF
THE STOMACH**



Milpath acts quickly to suppress pain and spasm, and to allay anxiety and tension with minimal side effects.

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IN TWO
POTENCIES:**

Milpath-400 — Yellow, scored tablets of 400 mg. Miltown (meprobamate) and 25 mg. tridihexethyl chloride. Bottle of 50.

Dosage: 1 tablet t.i.d. at mealtime and 2 at bedtime.

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Dosage: 1 or 2 tablets t.i.d. at mealtime and 2 at bedtime.

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®Miltown + anticholinergic

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1220



Letters to the Editor

This department is offered as an Open Forum for the discussion of topical medical issues. All letters must be signed. However, to protect the identity of writers who are invited to comment on controversial subjects, names will be omitted when requested.

Doctor Apathy

It is unfortunate that the physician almost always hides behind the cloak of having little or no time to participate in community affairs. The few physicians who supposedly have the time, become active in such affairs and purport to represent and speak for the remainder. The remainder, though they may disagree with their supposed representatives, merely criticize them but never find the time to participate or to be constructive. The result is that social planners, professors, para medical personnel are taking the ball away from the doctors in things that vitually affect their being and community responsibility.

A case in point is the medical care for the aged. Organized medicine feels that it has won a victory because a Forand type of legislation was defeated by the Congress of the United States and a measure to provide medical care for the indigent aged on a "public welfare" basis was passed. The democratic party is opposed to such legislation, and if their presidential candidate is elected, will make every effort to amend the present care for the aged bill. It is fortunate for medicine that such a bill has been passed now. It gives the voluntary health organizations another, perhaps their last, opportunity to show the public that they can handle the situation. For, if not, it is inevitable that the national government will come in if local communities do not do the health care jobs themselves. Physicians should make it their business to find the time to help their communities plan for the health care for the older person.

The present bill leaves much to be desired. It skips the basic problem of not providing adequate medical care for those who do not qualify for the indigent rolls and still cannot bear the full cost of private care. (This group makes up the majority of our older population.) In any community, two types of people always have adequate medical care; the indigent through clinics, wards and welfare agencies and the rich through their own funds. The remainder are the step children left to fend for themselves. This is the area in which the work of the community health organizations has to be done. When the vast majority of the public, namely the middle group are provided for the other lateral groups can then be looked after.

The present bill only provides for the left lateral group and poorly so. States have the right to accept, or reject this plan. New York State, for example, has delayed acceptance for the present. Social Security provides a way of forced savings for one's health care at an older age. With this saving, the best private medical care insurance, as exemplified by the "Shield Plans," can be bought by the government for the applicant.

This insurance should provide home office and hospital medical and surgical care and include radiological and laboratory office studies. The exact amount of coverage and cost can be worked out. These policies would naturally be of the indemnity type. However, the physicians could accept the fee in full as

Concluded on page 66a

Coming next month . . .

- **Pyelonephritis and Bacteriuria**

By Cheves McC. Smythe, M.D., Assistant Professor, Medical College of South Carolina, Charleston, South Carolina.

- **Frequent Testing for Proteinuria**

By James M. Moss, M.D., Clinical Associate Professor of Medicine, Director of Diabetes Clinic; George E. Schreiner, M.D., Associate Professor of Medicine, Director of Renal and Electrolyte Division; Vincent P. Sweeney, M.D., Director of Medicine, Department of Medicine; Georgetown University, School of Medicine and Georgetown University Hospital, Washington, D.C.

- **Coronary Heart Disease**

By Claude S. Beck, M.D., Professor, Cardiovascular Surgery, Western Reserve University and University Hospital and Dr. David S. Leighninger, M.D., Senior Instructor, Surgery, Cardiovascular Section, Western Reserve University, Cleveland, Ohio.

- **Alcoholism: A Challenge to the Physician**

By Yvelin Gardner, M.D., Deputy Executive Director of the National Council on Alcoholism, New York, New York.

- **Open Injuries of the Hand**

By John E. Kirkpatrick, M.D., San Francisco, California.

- **Therapy of Common Papulo-Squamous Eruptions**

By Maurice T. Fliegelman, M.D., and Adolph B. Loveman, M.D., Louisville, Kentucky.

- **The Art of Medicine: Integrity and Reason in Medicine**

By Edwin T. Arnold, Jr., M.D., Hogansville, Georgia.

- **The Tonsil Problem**

By Joseph Lubart, M.D., New York, New York.

- **Non-Fatal Accident Survey**

By Hugh A. Matthews, M.D., Canton, North Carolina.

- **Complications of Rheumatoid Arthritis**

By Guy T. Williams, M.D., Department of Medicine, Tulane University, of Louisiana School of Medicine; Touro Infirmary and Browne-McHardy Clinic, New Orleans, Louisiana.

LETTERS

Concluded from page 65a

provided by the policy or not depending on the financial status of the patient and his own discretion.

A policy of this type will provide the older citizen with private medical care and thus maintain his independence as regards medical care which is so important emotionally for him. The funds could also be used to buy the same type of insurance for the indigent instead of using it as originally intended. (As it is to be used now, it is a political grab bag.) The funds could also supplement the money necessary to buy private policies for those on social security until social security pays for itself. The majority of the right lateral group, namely those in good economic circumstances probably have adequate health insurance policies.

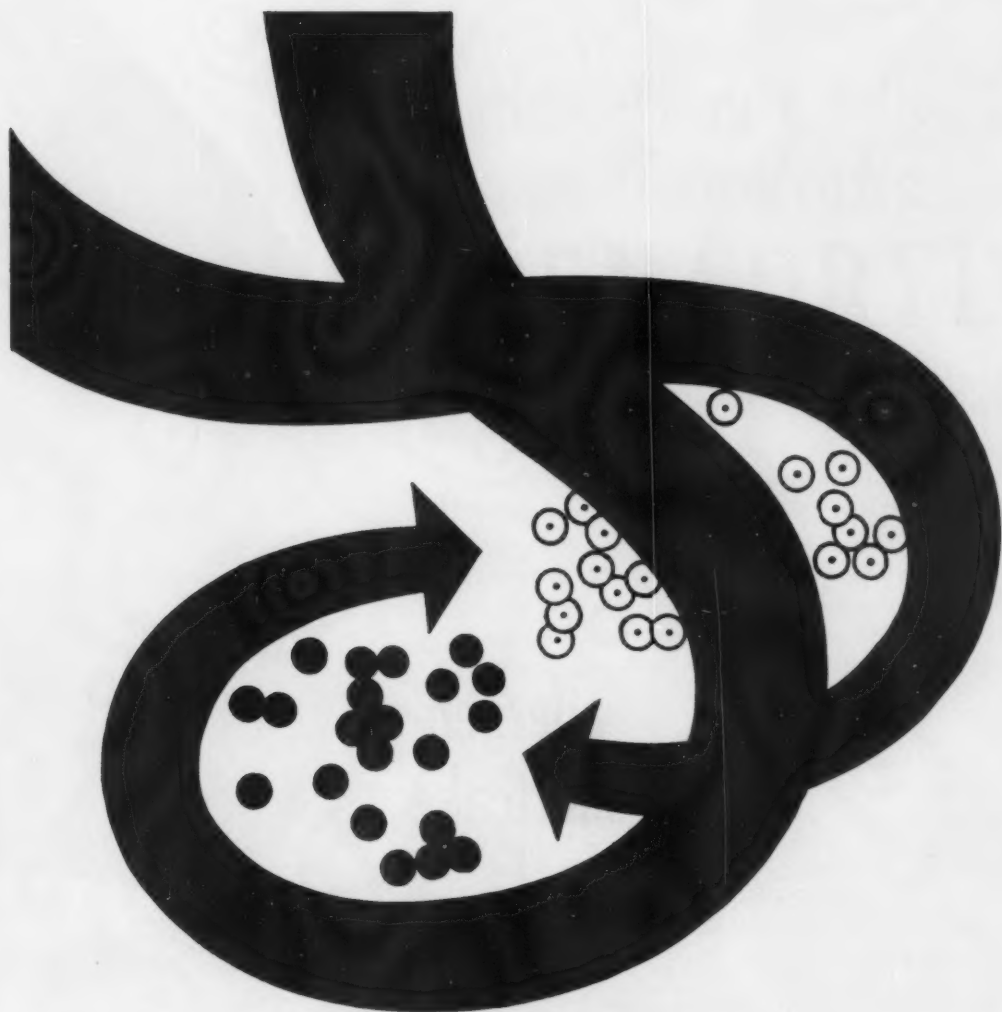
A controversial way of obtaining money for medical care would be by means of a lottery. The Irish have run one successfully for years and there is no reason why we could not do the same.

Private health insurance fits in best with the independent makeup of Americans and is the best answer to those who favor and those who are afraid of a socialist scheme of medicine.

MAXWELL SPRING, M.D., F.A.C.P.
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"Oh yes, the doctor's in . . . just got back from the medical convention . . ."



**Now...the only
Nystatin combination
with extra-active**

DECLOMYCIN®
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*with extra-broad spectrum benefits:—
action at lower milligram intake...broad-
range action...sustained peak activity...
extra-day security against resurgence of
primary infection or secondary invasion.*

Demethylchlortetracycline and Nystatin **LEDERLE**

CAPSULES, 150 mg. **DECLOMYCIN** Demethylchlortetracycline HCl and 250,000 units Nystatin.

DOSAGE: average adult, 1 capsule four times daily.

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sample forbidden fruit...

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antihistaminic-antispasmodic

gives prompt, comprehensive relief

In food sensitivity, BENADRYL provides simultaneous dual control of allergic symptoms. Gastrointestinal spasm, and the cutaneous and respiratory symptoms associated with food allergy, are favorably affected by the *antihistaminic action* of BENADRYL. Concurrently, its *antispasmodic effect* alleviates colicky pain, nausea, and vomiting. This duality of action makes BENADRYL valuable in many allergic disorders.

BENADRYL Hydrochloride (diphenhydramine hydrochloride, Parke-Davis) is available in a variety of forms including: Kapseals,® 50 mg. each; Kapseals, 50 mg., with ephedrine sulfate, 25 mg.; Capsules, 25 mg. each; Elixir, 10 mg. per 4 cc.; and for delayed action, Emplets,® 50 mg. each. For parenteral therapy, BENADRYL Hydrochloride Steri-Vials,® 10 mg. per cc.; and Ampoules, 50 mg. per cc.

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for relief of anxiety and tension

Outstandingly Safe

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- 5 does not impair mental efficiency or normal behavior

Miltown®

meprobamate (Wallace)

Usual dosage: One or two 400 mg. tablets t.i.d.

Supplied: 400 mg. scored tablets, 200 mg. sugar-coated tablets.

Also as MEPROTABS®—400 mg. unmarked, coated tablets; and as MEPROSPAN®—400 mg. and 200 mg. continuous release capsules.



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of clinical use...



...for the tense and nervous patient

Despite the introduction in recent years of "new and different" tranquilizers, Miltown continues, quietly and steadfastly, to gain in acceptance. Meproamate (Miltown) is prescribed by the medical profession more than any other tranquilizer in the world.

The reasons are not hard to find. Miltown is a *known* drug. Its few side effects have been fully reported. ***There are no surprises in store for either the patient or the physician.***

NEW analgesic

Kills pain



stops tension

For neuralgias, dysmenorrhea, upper respiratory distress, postsurgical conditions...new compound kills pain, stops tension, reduces fever—gives more complete relief than other analgesics.

Soma Compound is an entirely new, totally different analgesic combination that contains three drugs. First, Soma: a new type of analgesic that has proved to be highly effective in relieving both pain and tension.* Second, phenacetin: a "standard" analgesic and antipyretic. Third,

caffeine: a safe, mild stimulant for elevation of mood. As a result, the patient gets more complete relief than he does with other analgesics.

Soma Compound is nonnarcotic and nonaddicting. It reduces pain perception without impairing the natural defense reflexes.*

NEW NONNARCOTIC ANALGESIC

soma[®] Compound

Composition: Soma (carisoprodol), 200 mg.; phenacetin, 160 mg.; caffeine, 32 mg.
Dosage: 1 or 2 tablets q.i.d.
Supplied: Bottles of 50 apricot-colored, scored tablets.

NEW FOR MORE SEVERE PAIN

soma[®] Compound + codeine

BOOSTS THE EFFECTIVENESS OF CODEINE: Soma Compound boosts the effectiveness of codeine. Therefore, only ¼ grain of codeine phosphate is supplied to relieve the more severe pain that usually requires ½ grain.

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Supplied: Bottles of 50 white, lozenge-shaped tablets; subject to Federal Narcotics Regulations.

**References available on request.*

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After 8 weeks of treatment
with GRIFULVIN.

"THE TREATMENT OF CHOICE" IN TINEA PEDIS*

GRIFULVIN®

Griseofulvin

**FIRST ORAL SPECIFIC FOR RINGWORM INFECTIONS
OF SKIN, HAIR AND NAILS**

accurate diagnosis plus GRIFULVIN produce gratifying results

In tinea pedis, 4 to 8 weeks is usually sufficient for complete clearing. Most patients tolerate GRIFULVIN well.*

Average dose: 250 mg. q.i.d. or 500 mg. b.i.d. Concomitant therapy with appropriate topical agents may prove helpful.

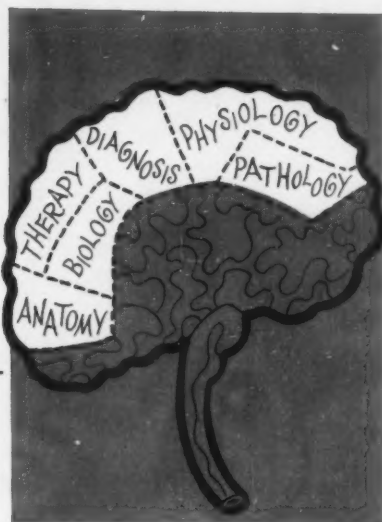
Supplied: new 500 mg. scored, yellow tablets, bottles of 20 and 100; and 250 mg. scored, aquamarine tablets, bottles of 16 and 100.

*Pardo-Castello, V.: A.M.A. Arch. Dermat. 81:772, 1960.

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Mediquiz

These questions were prepared especially for Medical Times by the Professional Examination Service, a division of the American Public Health Association. Answers will be found on page 194a.

1. An elevated serum alkaline phosphatase may be seen in:

- A) Cardiac failure.
- B) Hypophosphatemia.
- C) Malnutrition.
- D) Congenital extrahepatic bile duct atresia.
- E) Senile osteoporosis.

2. The oral d-xylose tolerance test is a measure of:

- A) Hepatocellular function.
- B) Alpha-cell activity.
- C) Pancreatic exocrine function.
- D) Intestinal absorption.
- E) Renal tubular function.

3. A dangerous complication of vigorous treatment of the thyrotoxic state is:

- A) Psychosis.
- B) Cardiac decompensation.
- C) Malignant exophthalmos.
- D) Myasthenia.
- E) Tetany.

4. In acute hepatic necrosis the serum vitamin B₁₂ level:

- A) Is essentially unaffected.
- B) Varies with the nutritional state.
- C) Falls.
- D) Varies with the icteric index.
- E) Rises markedly.

5. The incubation period of tetanus is usually:

- A) 36 hours.
- B) 3-4 days.
- C) 5-7 days.
- D) 8-12 days.
- E) 14-20 days.

6. An obese 43-year-old Puerto Rican female is noted to have jaundice. Laboratory results show an increase in total cholesterol, with a cephalin flocculation of one plus, a thymol turbidity to five, bromsulphthalein retention of 10 percent and no urine urobilinogen. Any of the following diseases could be considered as the underlying pathological process in the patient *except*:

- A) Chronic pancreatitis.
- B) Ascariasis.
- C) Primary carcinoma of the duodenum.
- D) Schistosomiasis.
- E) Carotenemia.

7. Which of the following conditions is *least* likely to be associated with peptic ulcer?

- A) An insulinoma.
- B) A third degree burn.
- C) A parathyroid adenoma.
- D) Hypertrophic pyloric stenosis.
- E) Acute bulbar poliomyelitis.

8. An abrupt margin between normal skin and transcutaneous necrosis is characteristic of:

- A) A carbuncle.
- B) A chemical burn.

Concluded on page 78a

*established starting point
for individualized management
of cow's milk sensitivity*

MULL-SOY[®]

LIQUID / POWDERED

Since food allergy creates clinical problems requiring **individualized** management, the disadvantages of a "fixed" formula are apparent. MULL-SOY, however, provides all the management flexibility of evaporated milk, and may be used in the same way.

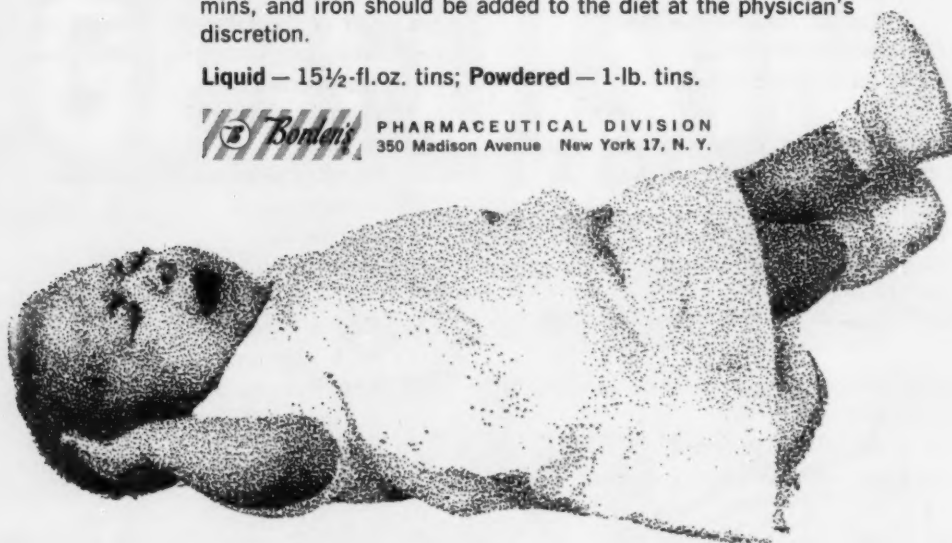
Type and quantity of carbohydrate — and degree of dilution — can be adjusted to the needs of each case. Yet MULL-SOY assures well tolerated protein for good growth, a fat content high in linoleic and the other important unsaturated fatty acids, and dependable relief from milk-allergy manifestations such as eczema, asthma, persistent rhinitis, hyperirritability, colic, diarrhea, vomiting (pylorospasm), and nasal stuffiness.

Other essential nutrients such as vitamins A, D, C, the B vitamins, and iron should be added to the diet at the physician's discretion.

Liquid — 15½-fl.oz. tins; **Powdered** — 1-lb. tins.



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EVEN HOT STAPH.* SUCCUMB TO FURACIN® NASAL

brand of nitrofurazone

with phenylephrine

to conquer a growing problem—resistant staph.

"We have used FURACIN Nasal successfully in eradicating staphylococci from the nasal passages of our nursing personnel. The majority of cases are cleared with 5 days of treatment."¹

routine in sinusitis, rhinitis and nasopharyngitis

"Intranasal and sinus infections have been found to disappear promptly . . . helps to combat the associated nasopharyngitis."²

■ wide bactericidal range ■ negligible bacterial resistance ■ no cross-sensitization or bacterial cross-resistance to systemic agents ■ low sensitization rate ■ no irritation, no stinging, no slowing of the ciliary beat ■ no interference with phagocytosis or healing.

FORMULA: FURACIN 0.02% with phenylephrine-HCl 0.25% in an aqueous, isotonic solution of sodium salts and methylparaben.

SUPPLY: Plastic atomizer of 15 cc. for administration by either spray or drop.

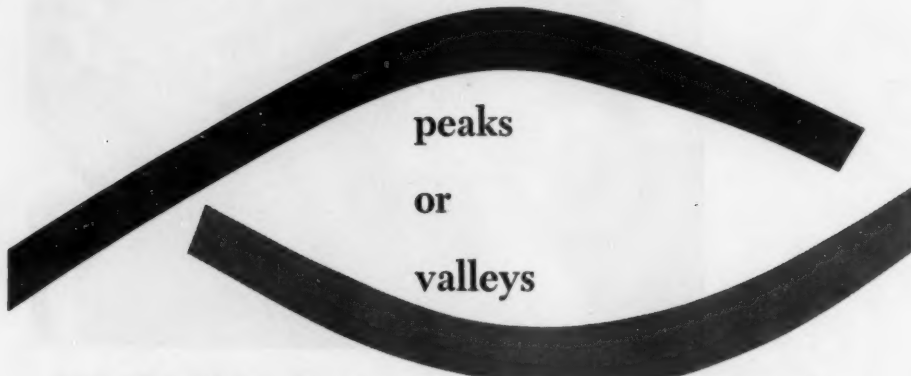
References: 1. Personal Communication to Eaton Laboratories, 1959. 2. Spencer, J. T., in Conn, H. F.: *Current Therapy* 1954, Philadelphia, W. B. Saunders Co., 1954, p. 130.

*antibiotic-resistant staphylococci

THE NITROFURANS—a unique class of antimicrobials—neither antibiotics nor sulfonamides
EATON LABORATORIES, NORWICH, NEW YORK

no more

therapeutic



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or

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You will find that Digitaline Nativele, the original crystalline digitoxin, provides exactly the balanced, controlled maintenance dose you want for your cardiac patient. Its duration of activity is neither too short nor unduly prolonged, well suited to daily maintenance therapy. Its complete absorption and purity assure uniform potency, precision of dosage, total utilization and effectiveness. A product of Nativele, Inc.

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safe antibiosis

Triacetyloleandomycin, equivalent to oleandomycin 125 mg. This is the URI antibiotic, clinically effective against certain antibiotic-resistant organisms.

fast decongestion

Triaminic®, 25 mg., three active components stop running noses. Relief starts in minutes, lasts for hours.

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Calurin®, calcium acetylsalicylate carbamide equivalent to aspirin 300 mg. This is the freely-soluble calcium aspirin that minimizes local irritation, chemical erosion, gastric damage. High, fast blood levels.

TAIN brings quick, symptomatic relief of the common cold (malaise, headache, muscular cramps, aches and pains) especially when susceptible organisms are likely to cause secondary infection. Usual adult dose is 2 Inlay-Tabs, q.i.d. In bottles of 50. B only. Remember, to contain the bacteria-prone cold...TAIN.

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- C) A herpetic vesicle.
- D) A diabetic ulcer.
- E) An electrothermal injury.

9. Cells with an eccentric cart-wheel nucleus and an adjoining clear area are called:

- A) Gitter cells.
- B) Sternberg-Reed cells.
- C) Plasma cells.
- D) Kupffer cells.
- E) Leydig cells.

10. Among macrophages found in areas of softening in the brain are:

- A) Epithelioid cells.
- B) Gitter cells.
- C) Schlemm cells.

- D) Kupffer cells.
- E) Leydig cells.

11. Leukocytes can pass into tissues through:

- A) Capillaries only.
- B) Anoxic vessel walls only.
- C) Necrotic membranes.
- D) Ruptured vessels walls only.
- E) Intact vessel walls.

12. Administration of ACTH to a patient with classic adrenogenital syndrome increases urinary:

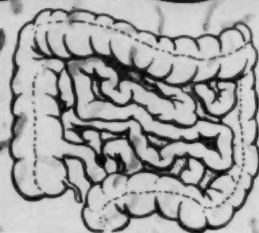
- A) Pregnanetriol.
- B) Aldosterone.
- C) 17-hydroxy corticosteroids.

prevent and clear up

antibiotic-caused diarrhea

new!

Bacid[®]
capsules



- D) Progesterone.
- E) 17-hydroxy indole-acetic acid.

13. Decreased leukocytic alkaline phosphatase and increased serum vitamin B₁₂ occur in:

- A) Polycythemia vera.
- B) Infectious mononucleosis.
- C) Leukemoid reaction.
- D) Chronic myelogenous leukemia.
- E) Acute lymphocytic leukemia.

14. A false positive Benedict test may follow the administration of:

- A) Steroids.
- B) Oral glucose.
- C) Aspirin.
- D) Pentobarbital.
- E) Erythromycin.

15. A condition in which the serum alkaline phosphatase is *not* elevated is:

- A) Congenital extrahepatic duct atresia.
- B) Infectious mononucleosis.

- C) Congenital intrahepatic duct atresia.
- D) Hepatic amyloidosis.
- E) Cholangiolitic hepatitis.

16. Failure to increase a low serum carotene value after oral administration of 15,000 units o. d. x 5 suggests:

- A) A malabsorption syndrome.
- B) Advanced liver disease.
- C) Advanced diabetes.
- D) Hyperthyroidism.
- E) An inadequate loading dose.

17. Failure of a patient with adrenogenital syndrome to respond to cortisone therapy suggests an underlying:

- A) Adrenal hyperplasia.
- B) Eosinophilic pituitary adenoma.
- C) Seminoma.
- D) Adrenal tumor.
- E) Chromophobe pituitary adenoma.

(Answers on page 194a)

Bacid

the highest available potency of viable *L. acidophilus* (a specially cultured human strain) with 100 mg. of sodium carboxymethylcellulose per capsule.

use BACID with every antibiotic Rx for effective antidiarrheal protection.

BACID acts to re-implant billions of friendly *Lactobacillus acidophilus* in the intestinal tract. This serves to create an aciduric flora hostile to the growth of putrefactive bacteria and antibiotic-resistant pathogens. BACID is most useful to help prevent and overcome diarrhea, flatulence, perianal itching and other symptoms due to antibiotics, etc. Also valuable in functional constipation, irritable colon, diverticulitis.

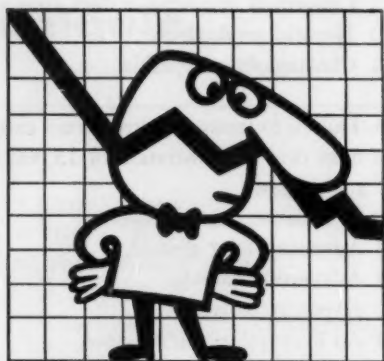
completely non-toxic — physiologic BACID is safe and well tolerated in many times the suggested dosage (2 capsules, two to four times a day, preferably with milk).

Bottle of 100 capsules.

samples and descriptive literature from...

u. s. vitamin & pharmaceutical corporation

Arlington-Funk Laboratories, division
250 East 43rd Street, New York 17, N. Y.



A U. S. Senator recently said, "In investigating the pharmaceutical industry, we are investigating and inquiring into an industry that has won and which deserves public approval and confidence... It has been my judgment that the hearings to which I have referred, so far have been prejudiced and distorted." To paraphrase a political saying...

Let's Look At The Record On Drug Prices

In relation to "real income," drug prices have actually declined in recent years. At prevailing wages in 1929, it took 91 minutes of working time to pay for the average prescription. Only 86 minutes of labor paid for the average prescription in 1958. As one economist put it, "If the retail prices of drugs had risen as much as the consumer price index since 1939, it would cost the consumer at least an additional one billion dollars to buy the drug preparations now consumed." He goes on to compare the \$19.02 per capita drug expenditure in 1958 with the \$37.19 spent on tobacco products and \$53.72 for alcoholic beverages. • When your patients inquire about the cost of medication, perhaps these facts will be helpful in explaining that today's prescription, averaging about \$3.00, is a relatively modest investment in better health and a longer, more productive life.

This message is brought to you in behalf of the producers of prescription drugs. For additional information, please write Pharmaceutical Manufacturers Association, 1411 K Street, N.W., Washington 5, D.C.

NaClex[®]

benzthiazide

a new diuretic
with an
unsurpassed
faculty for
salt excretion



as salt goes, so goes edema

A basic principle of diuresis is that "increased urine volume and loss of body weight are proportional to and the osmotic consequences of loss of ions."¹

Robins' new NaClex is a potent, oral, non-mercurial diuretic that helps reduce edema through the application of this fundamental principle. It limits the reabsorption of sodium and chloride in the renal proximal tubules (*with a relative sparing of potassium*). The body's homeostatic mechanism responds by increasing the excretion of excess extracellular water. Thus the NaClex-induced removal of salt leads to a reduction of edema.

a unique chemical structure

NaClex (benzthiazide) is a new molecule which provides a "pronounced increase in diuretic potency"² over its antecedent sulfonamide compound. Compared tablet for tablet with current oral diuretics, it is unsurpassed in diuretic potency.

twofold value

NaClex produces diuresis, weight loss, and symptomatic improvement in edema associated with various conditions. It also has antihypertensive properties and may be used alone in mild hypertension or with other antihypertensive drugs in severer cases.

For complete dosage schedules, precautions, or other information about NaClex, please consult basic literature, package insert, or your local Robins representative, or write to the A. H. Robins Co., Inc.

Supply: Yellow, scored 50 mg. tablets.

References: 1. Pitts, R. F., *Am. J. Med.*, 24:745, 1958. 2. Ford, R. V., *Cur. Therap. Res.*, 2:51, 1960.

A. H. ROBINS COMPANY, INC.
RICHMOND 20, VIRGINIA



ENOUGH IRON

Jefron Elixir provides *enough iron*—100 mg. per 5 cc. teaspoonful—to produce adequate hematopoietic response in uncomplicated iron deficiency anemia.

And with Jefron you can give *enough iron*—without gastric upset—in severe anemias, requiring increased dosage, and in prolonged therapy needed to replenish tissue stores.

DOSAGE: The recommended daily dosage is: For infants and children under six, 0.6 cc. to $\frac{1}{4}$ teaspoonful. For children six to twelve, $\frac{1}{4}$ to 1 teaspoonful. For adults, 1 or 2 teaspoonfuls. Supplied: 8 oz. bottles.



PITMAN-MOORE COMPANY DIVISION OF ALLIED LABORATORIES, INC., INDIANAPOLIS 6, INDIANA



Jefron™ Elixir

Jefron Elixir is so palatable and so well tolerated that it is acceptable to almost all patients.

New medical survey shows what doctors consider most important in a laxative they would use or recommend:



To find out the qualities doctors consider most important in a laxative they would use or recommend, an independent research organization asked doctors across the country for their professional opinions. The survey findings show that doctors want a laxative that is (1) Gentle, (2) Effective and (3) Close to Natural Acting.

These are the qualities that have made pleasant-tasting Ex-Lax so widely used and recommended over the years—the same qualities that make Ex-Lax so well suited for 1960's professional needs.





LOMOTIL
EXACT
TABLET-SIZE

A NEW THERAPEUTIC ENTITY FOR DIARRHEA

LOMOTIL[®]

SELECTIVELY LOWERS PROPULSIVE MOTILITY

LOMOTIL represents a major advance over the opium derivatives in controlling the propulsive hypermotility occurring in diarrhea.

Precise quantitative pharmacologic studies demonstrate that Lomotil controls intestinal propulsion in approximately $\frac{1}{11}$ the dosage of morphine and $\frac{1}{20}$ the dosage of atropine and that therapeutic doses of Lomotil produce few or none of the diffuse untoward effects of these agents.

Clinical experience in 1,314 patients amply supports these findings. Even in such a severe test of antidiarrheal effectiveness as the colonic hyperactivity in patients with colectomy, Lomotil is effective in significantly slowing the fecal stream.

Whenever a paregoric-like action is indicated, Lomotil now offers positive antidiarrheal control... with safety and greater convenience. In addition,

as a nonrefillable prescription product, Lomotil offers the physician full control of his patients' medication.

PRECAUTION: While it is necessary to classify Lomotil as a narcotic, no instance of addiction has been encountered in patients taking therapeutic doses. The abuse liability of Lomotil is comparable with that of codeine. Patients have taken therapeutic doses of Lomotil daily for as long as 300 days without showing withdrawal symptoms, even when challenged with nalorphine.

Recommended dosages should not be exceeded.

DOSAGE: The recommended initial dosage for adults is two tablets (5 mg.) three or four times daily, reduced to meet the requirements of each patient as soon as the diarrhea is controlled. Maintenance dosage may be as low as two tablets daily. Lomotil, brand of diphenoxylate hydrochloride with atropine sulfate, is supplied as unscored, uncoated white tablets of 2.5 mg., each containing 0.025 mg. ($\frac{1}{2400}$ gr.) of atropine sulfate to discourage deliberate overdosage.

Subject to Federal Narcotic Law.

Descriptive literature and directions for use available in Physicians' New Product Brochure No. 81 from

G. D. SEARLE & CO.
P.O. Box 5110, Chicago 80, Illinois

Research in the Service of Medicine



EFFICACY AND SAFETY of Lomotil are indicated by its low median effective dose. As measured by inhibition of charcoal propulsion in mice, Lomotil was effective in about $\frac{1}{11}$ the dosage of morphine hydrochloride and in about $\frac{1}{20}$ the dosage of atropine sulfate.



MODERN MEDICINALS

These brief résumés of essential information on the newer medicinals, which are not yet listed in the various reference books, can be pasted on file cards. This file can be kept by the physician for ready reference.

Caldesene Medicated Ointment, Maltbie Laboratories Division, Wallace & Tiernan Inc., Belleville, New Jersey. Contains 15% calcium undecylenate in a water-washable base. Indicated to bring soothing relief to sore, burning, itching skin in diaper rash, minor skin irritations, chafing, and prickly heat. *Use:* Apply after cleansing skin, rub on gently. *Sup:* Collapsible tubes of 1½ oz.

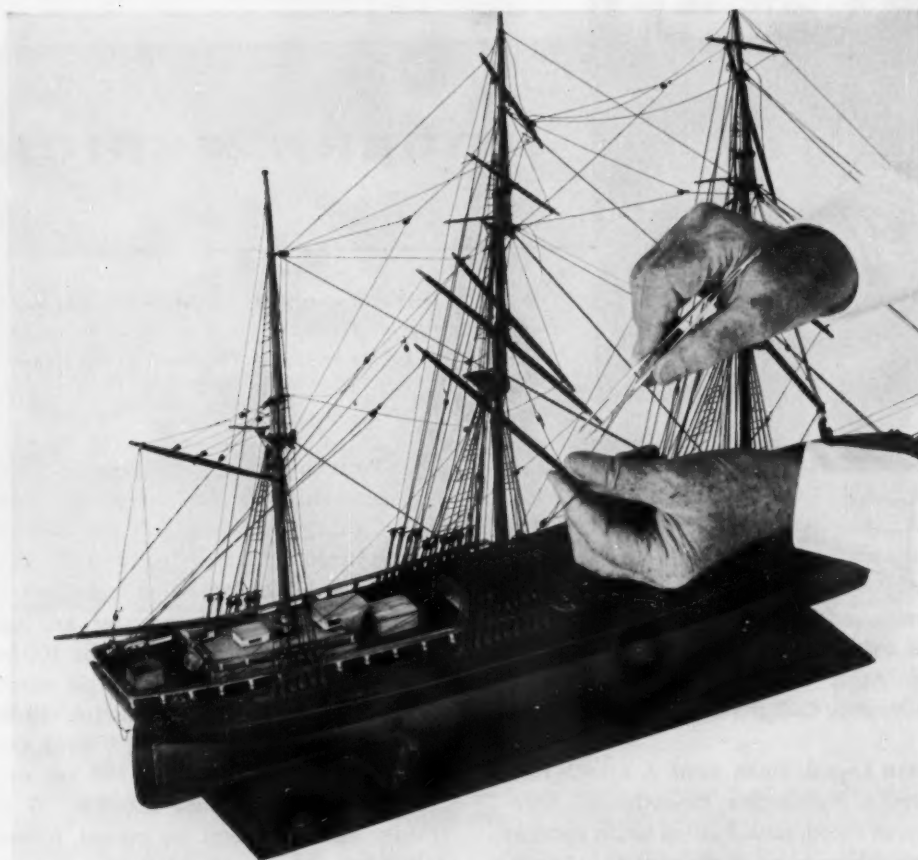
Coplexan Liquid, Smith Kline & French Laboratories, Philadelphia, Pennsylvania. Fruit-flavored liquid, each 5 cc. of which contains 2 mg. trimeprazine as the tartrate, 120 mg. acetaminophen, and 10 mg. phenylpropanolamine hydrochloride. Indicated for use in children to control cough, nasal congestion, fever, muscular aches and pains, irritability, restlessness and insomnia. *Dose:* Children 10-24 lbs., ½ tsp.; 25-74 lbs., 1 tsp.; 75 lbs., or more, 1 or 2 tsp.—all at 4-6 hour intervals if needed. *Sup:* Bottles of 12 oz.

Decadron Elixir, Merck Sharp & Dohme, Division of Merck & Co., Inc., Philadelphia, Pennsylvania. New dosage form, each 5 cc. containing 0.5 mg. Dexamethasone. Primarily a pediatric product, it is indicated for conditions including rheumatoid arthritis, skin diseases, allergies, etc. *Dose:* Must be individualized according to the severity of the disease and the response of the patient. *Sup:* 100 cc. bottles with calibrated dropper assembly.

Depo-Provera, The Upjohn Company, Kalamazoo, Michigan. Sterile aqueous suspension, each cc. containing 50 mg. medroxyprogesterone acetate. Indicated in endometriosis, habitual abortion and threatened abortion. *Dose:* Intramuscular use only. Endometriosis, 50 mg. weekly or 100 mg. every two weeks for at least six months. Habitual abortion, first trimester, 50 mg. every week; second trimester, 100 mg. every two weeks; third trimester, 100 mg. every two weeks. Threatened abortion, 50 mg. daily when symptoms are present, followed by 50 mg. weekly through the first trimester, or until fetal viability is evident. *Sup:* Vials of 1 cc. and 5 cc.

Hycomine Compound Tablets, Endo Laboratories, Richmond Hill, New York. Each tablet contains 6.5 mg. Hycodan (5 mg. dihydrocodeinone bitartrate and 1.5 mg. homatropine methylbromide); 2 mg. chlorpheniramine maleate, 10 mg. phenylephrine HCl, 250 mg. N-acetyl-p-aminophenol, and 30 mg. caffeine. Indicated to provide comprehensive relief of allergic and nonallergic symptoms of respiratory tract infections associated with cough, aches and pains, nasal congestion, sneezing, rhinorrhea, etc. *Dose:* Adults, one tablet four times daily; children 6-12, ½ tablet four times daily; children 2-6, ½ tablet twice daily. *Sup:* Bottles of 100, 500 and 1000.

Continued on page 90a



"the most effective drug against tremor..."¹

IN PARKINSONISM Parsidol exceeds all other drugs for reducing tremor,¹ a major impairment in this disease. Parsidol also lessens rigidity, brightens the patient's mood and contributes to restoration of self-confidence. Especially well tolerated by older patients,^{1,2,3} Parsidol is effective alone, and most patients respond well to a maintenance dosage of 50 mg. q.i.d. Parsidol is compatible with other antiparkinsonian drugs and can be given in combination if so desired.

PARSIDOL®

brand of ethopropazine hydrochloride

PARKINSONISM

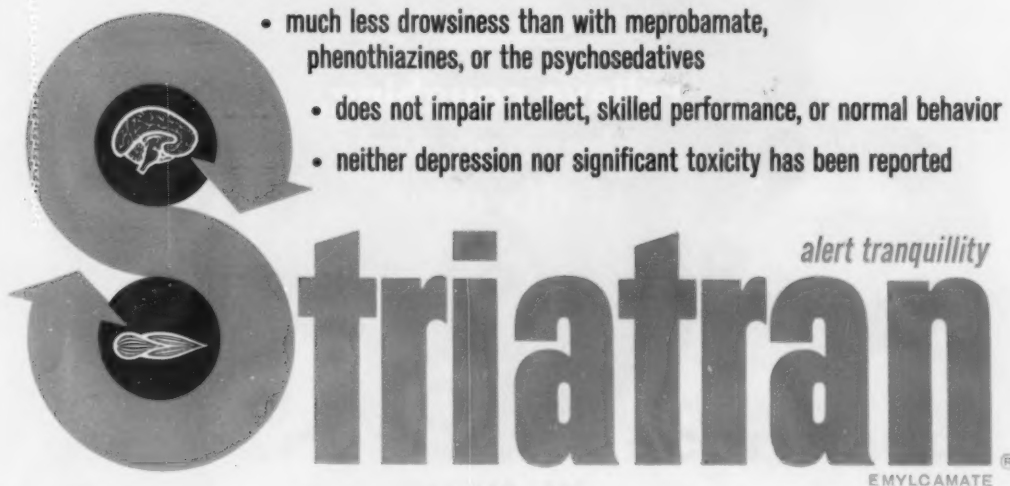


1. Schwab, R. S. and England, A. C.: *J. Chron. Dis.* 8:488 (Oct.) 1958.
2. Schwab, R. S.: *Geriatrics* 14:545 (Sept.) 1959.
3. Doshay, L. J. et al.: *J.A.M.A.* 160:348 (Feb. 4) 1956.

PAR-GP04

a new, improved, more potent relaxant for anxiety and tension

- effective in half the dosage required with meprobamate
- much less drowsiness than with meprobamate, phenothiazines, or the psychosedatives
- does not impair intellect, skilled performance, or normal behavior
- neither depression nor significant toxicity has been reported



- a familiar spectrum of antianxiety and muscle-relaxant activity
- no new or unusual effects—such as ataxia or excessive weight gain
- may be used in full therapeutic dosage even in geriatric or debilitated patients
- no cumulative effect
- simple, uncomplicated dosage, providing a wide margin of safety for office use

STRIATRAN is indicated in anxiety and tension, occurring alone or in association with a variety of clinical conditions.

Adult Dosage: One tablet three times daily, preferably just before meals. In insomnia due to emotional tension, an additional tablet at bedtime usually affords sufficient relaxation to permit natural sleep.

Supply: 200 mg. tablets, coated pink, bottles of 100.

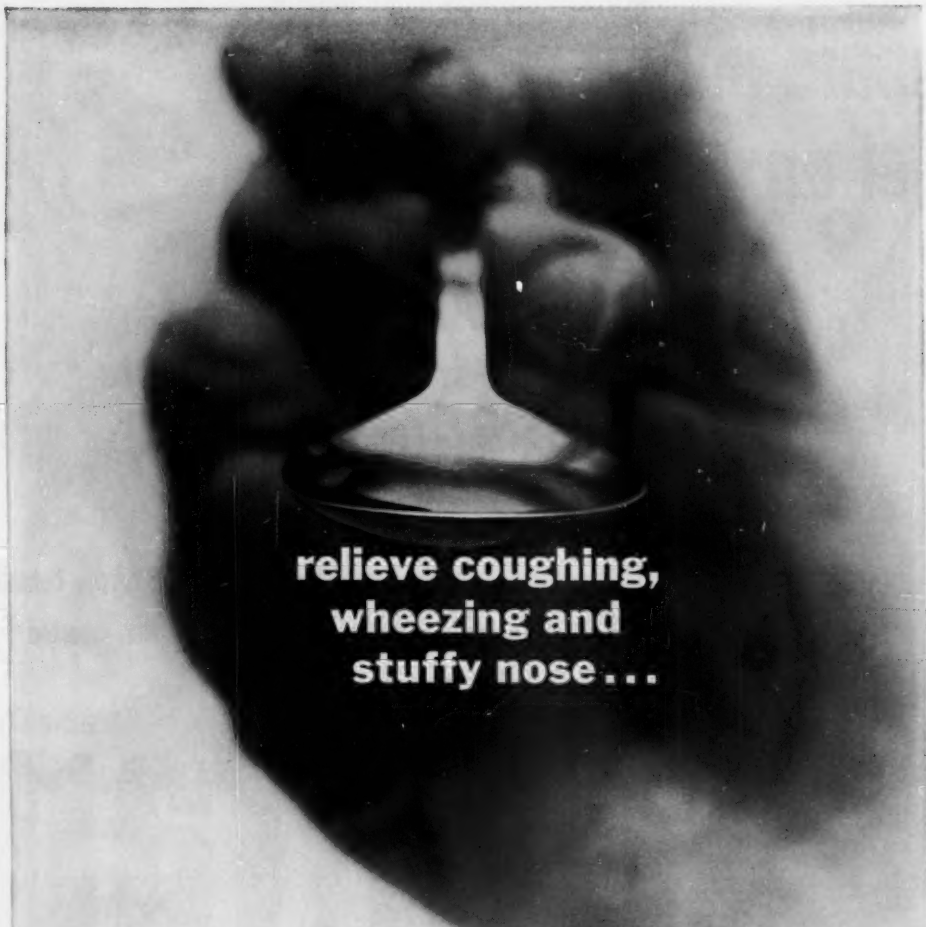
While no absolute contraindications have been found for Striatran in full recommended dosage, the usual precautions and observations for new drugs are advised.

For additional information, write Professional Services,
Merck Sharp & Dohme, West Point, Pa.



MERCK SHARP & DOHME, DIVISION OF MERCK & CO., INC., WEST POINT, PA.

STRIATRAN IS A TRADEMARK OF MERCK & CO., INC.



relieve coughing,
wheezing and
stuffy nose...

with NEW
'ACTIFED-C' EXPECTORANT
brand

ANTITUSSIVE • EXPECTORANT • BRONCHODILATOR • DECONGESTANT • ANTIHISTAMINIC

The etiology of cough is such that drug therapy designed to produce relief may be called upon to provide several therapeutic actions simultaneously. The ingredients of 'Actifed-C' Expectorant were selected because they produce desirable antitussive, expectorant, bronchodilator, decongestant and antihistaminic effects.



BURROUGHS WELLCOME & CO. (U.S.A.) INC., Tuckahoe, New York

Each 5 cc. teaspoonful contains:

'Actidil'® brand Triprolidine Hydrochloride 2 mg.
'Sudafed'® brand Pseudoephedrine Hydrochloride 30 mg.
Codeine Phosphate 10 mg.
Glyceryl Guaiacolate 100 mg.

Dosage: Adults and children over 12 years—2 tsp., 4 times daily. Children 6 to 12 years—1 tsp., 4 times daily. Infants and children up to 6 years—½ tsp., 4 times daily.

Precaution: Although pseudoephedrine hydrochloride causes virtually no pressor effect in normotensive patients, it should be used with caution in patients with hypertension. In addition, even though triprolidine hydrochloride produces only a low incidence of drowsiness, appropriate precautions should be observed.



e

EFFICIENT & ACCEPTABLE

PRONEMIA provides iron in a highly efficient and readily accepted form—as ferrous fumarate—for a heightened hematologic response per mg./dose and a lowered risk of gastrointestinal irritation. Formula and toleration assure full dosage **every day**...because patients rarely forget, or reject, the once-a-day regimen. PRONEMIA includes all needed hematinic factors with AUTRINIC® Intrinsic Factor Concentrate and Vitamin B₁₂.

Each PRONEMIA capsule contains:

Vitamin B₁₂ with AUTRINIC®
Intrinsic Factor Concentrate
2 U.S.P. Oral Units
Ferrous Fumarate 350 mg.
(Elemental Iron, 115 mg.)
Ascorbic Acid (C) 150 mg.
Folic Acid 2 mg.

Available on your prescription only

IN EASY 1-CAPSULE DAILY PRONEMIA®

Hematinic Lederle

LEDERLE LABORATORIES, a Division of AMERICAN CYANAMID COMPANY, Pearl River, New York

Fleet Theophylline Rectal Unit, C. B. Fleet Co., Inc., Lynchburg, Virginia. Simplified theophylline dosage form containing 0.3125 Gm. theophylline monoethanolamine in 37 ml. clear, aqueous solution. Since a small amount of the solution is left in disposable bottle after administration, the unit delivers 0.25 Gm. of theophylline. Indicated for prevention and symptomatic relief of acute bronchial asthma, acute episodes of heart failure, especially for relief of paroxysmal dyspnea associated with heart failure, coronary artery disease, relief of angina pectoris. *Dose*: Usual, contents of a single unit as often as the physician may direct. *Sup*: Prescription package of six individual, ready-to-use units containing enema solution and pre-lubricated rectal tube.

Hydrodiuril-Ka, Merck Sharp & Dohme, Division of Merck & Co., Inc., Philadelphia, Pennsylvania. Sugar-coated tablets containing either 25 mg. or 50 mg. hydrochlorothiazide in an outer coating around an enteric-coated core of 572 mg. potassium chloride. Indicated as a diuretic or anti-hypertensive, the hydrochlorothiazide being released immediately in the stomach while the potassium chloride passes through stomach and is released in small intestine to minimize gastric irritation. *Sup*: Both strengths in bottles of 100.

Lida-Mantle, Dome Chemicals, New York, New York. Creme containing Xylocaine hydrochloride in the exclusive Acid Mantle vehicle. Designed to stop itching and help skin resist irritation. Indicated for itching or pain associated with eczemas, abrasions, hemorrhoids, pruritus ani, anal fissures, sunburn, minor burns, sore nipples, x-ray burns, poison ivy, herpes zoster and other condi-

tions of the skin and accessible mucous membranes. *Use*: Apply liberally as often as necessary. *Sup*: Tubes of ½ oz. and 1 oz.

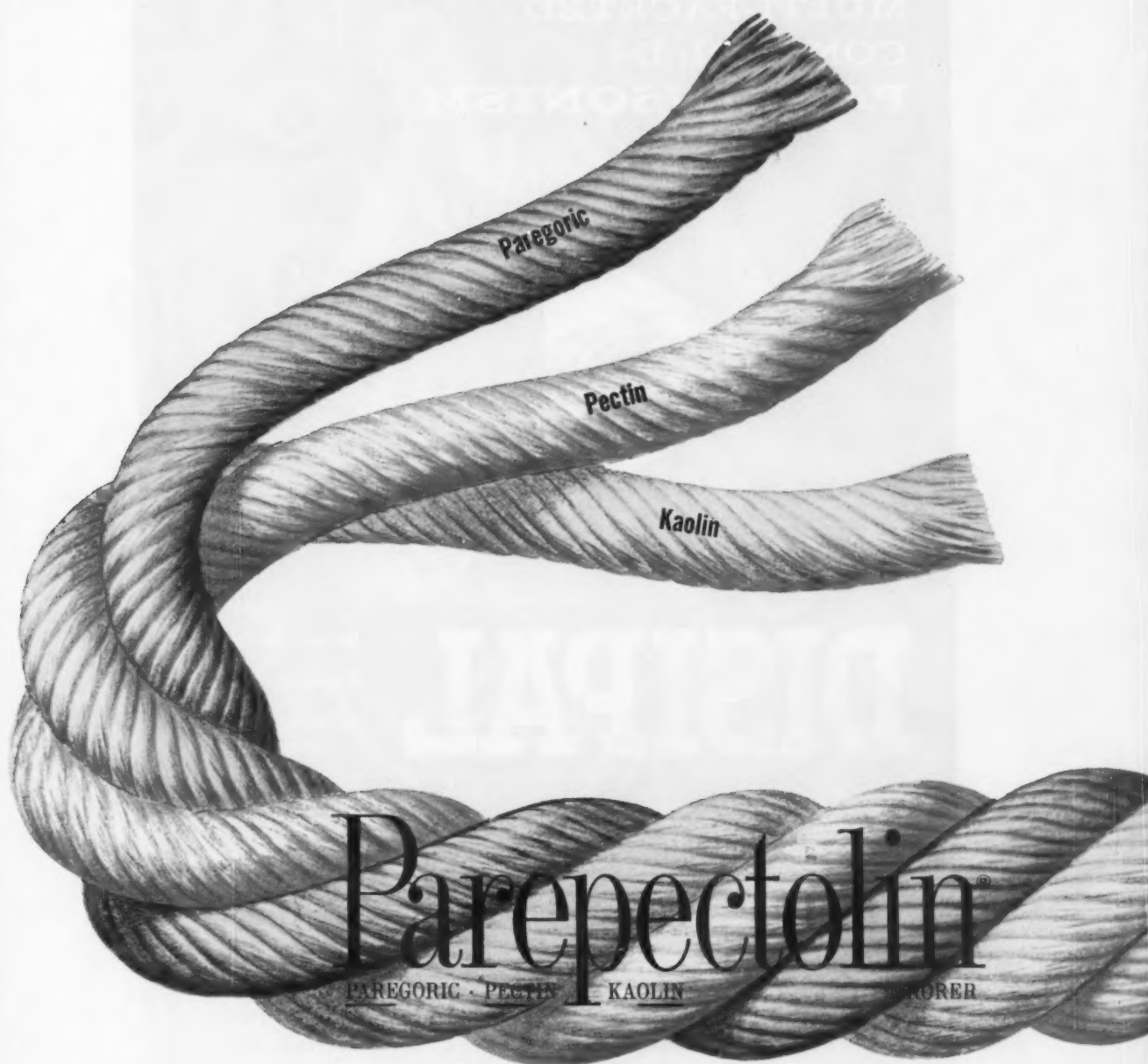
Mellaril 50 mg., Sandoz Pharmaceuticals, Division of Sandoz, Inc., Hanover, New Jersey. New potency tablet to satisfy physician and hospital requests for greater flexibility in dosage. Indicated for mental and emotional disturbances marked by tension, apprehension, anxiety, excitement, or agitation. *Dose*: Usual starting dose in nonpsychotic patients is 10 mg. or 25 mg. three or four times daily. Psychotic patients require 100 mg. three or four times daily as a starting dose. *Sup*: Bottles of 100.

Phazyme, Reed & Carnrick, Kenilworth, New Jersey. Tablets, containing in the outer layer for release in the stomach, 100 mg. pepsin N.F., 25 mg. diastase, and 20 mg. activated dimethyl polysiloxane; and in the inner core for release in the duodenum, 240 mg. pancreatin N.F., and 40 mg. activated dimethyl polysiloxane. Indicated for relief of distress, such as bloating, belching and flatulence caused by gas due to overindulgence in food or air swallowing. *Dose*: One tablet with meals and upon retiring. *Sup*: Bottles of 50 and 100.

Prolixin Injection, E. R. Squibb & Sons, Division of Olin Mathieson Chemical Corp., New York, N. Y. New dosage form, each cc. of which contains 2.5 mg. fluphenazine dihydrochloride. Indicated for rapid, complete and prolonged tranquilization of the violently-excited or noncooperative patient. Prolonged action of Prolixin permits single daily administration of maintenance dosage in many patients. *Sup*: Multiple dose vials of 10 cc.

Concluded on page 94a

to **CONTROL DIARRHEA...**the traditional and time-tested triad
of effective and safe agents



Pleasant taste *plus* predictable, prompt response in diarrhea

Parepectolin combines paregoric, pectin, kaolin in a *balanced, stable colloidal suspension*, with a smooth, creamy consistency and a pleasant, mildly aromatic flavor. Parepectolin is compatible with antibiotics, and retains its uniform consistency and its good flavor.

Parepectolin; each fluid ounce—Paregoric (equivalent) 1.0 dram, Pectin 2.5 gr., Kaolin (specially purified) 85 gr. Bottles of 4 and 8 fluid ounces.



WILLIAM H. RORER, INC. PHILADELPHIA, PENNSYLVANIA

MULTI-FACETED CONTROL IN PARKINSONISM



DISIPAL^{®*}

Brand of Orphenadrine HCl

Minimal side reactions

Nonsoporific

No known organic
contraindications

a Lessens rigidity and tremor

b Energizes against fatigue,
adynamia and akinesia

c An effective euphoriant

d Thoroughly compatible with
other antiparkinsonism medi-
cations

e Highly selective action

f Potent action against
sialorrhea

g Counteracts diaphoresis,
oculogyria and blepharo-
spasm

h Well tolerated—even in pres-
ence of glaucoma

Dosage: usually 1 tablet (50 mg.) t.i.d. When used in
combination, dosage should be correspondingly reduced.



Menlo Park,
California

Bibliography and file card
available on request

* Trademark of Brocades-Stheeman &
Pharmacia, U.S. Patent No. 2,567,351.
Other Patents Pending.

15% reduction IN COST TO YOUR PATIENTS

3rd Big Price Reduction
Since Product Release*

- extends benefits to more patients at LOWER COST
- treats tinea effectively and MORE ECONOMICALLY



AVAILABLE AS
250 AND 500 MG. TABLETS

*Since introduction, Schering Corporation has reduced the price of FULVICIN by an initial 20%, later by 15% and now is effecting an additional 15% reduction.

SCHERING CORPORATION • BLOOMFIELD, NEW JERSEY

Schering

Rectalyt, Mallon Division, Doho Chemical Corp., New York, New York. Each 3 Gm. dose of Rectalyt is supplied in a convenient disposable Rectisert, consisting of a soft plastic rectal applicator with a flexible, slim, prelubricated tip and a bulb containing the medication. Contains 10 mg. hydrocortisone alcohol, 105 mg. sodium dimethylacroyl sulfanilamide, 175 mg. benzocaine, 17.5 mg. menthol. Indicated in acute inflamed internal hemorrhoids, proctitis, inflamed postoperative scar tissue, itching and burning symptoms in allergy, discomfort from Sjorgren's syndrome. *Use*: One Rectalyt three times a day (preferably after bowel movement). When administered by physician, knee-chest position is desirable. *Sup*: Boxes of 12, individually sealed in plastic envelopes.

Tain, Smith-Dorsey, Division of The Wander Company, Lincoln, Nebraska. Inlay-tabs, each containing triacetyloleandomycin equivalent to 125 mg. oleandomycin, 12.5 mg. phenylpropanolamine HCl, 6.25 mg. pheniramine maleate, 6.25 mg. pyrilamine maleate and 300 mg. calcium acetylsalicylate carbamide equivalent to aspirin. Indicated for the symptomatic relief of the common cold and the prevention of secondary complications due to susceptible organisms. *Dose*: Adults, two Inlay-tabs four times daily. *Sup*: Bottles of 50.

Twistussin, McNeil Laboratories, Inc., Philadelphia, Pennsylvania. Fruit-flavored, orange-colored syrup containing in each teaspoonful (5 cc.) 2 mg. Twiston rotoxamine, 5 mg. phenylephrine HCl, 100 mg. glyceryl guaia-colate, and 1.67 mg. dihydrocodeinone bitartrate. Indicated for the treatment of cough, rhinitis, and nasal congestion associated with the common cold and other upper respiratory infections such as bronchitis and tracheitis; also for the relief of symptoms

associated with allergic disorders. *Dose*: Adults, one to two teaspoonfuls every four hours; children, 1-4 years of age, $\frac{1}{4}$ to one teaspoonful every four hours; over 4 years of age, one teaspoonful every four hours—all dosages up to four times a day. *Sup*: Bottles of 16 oz.

Ulo Syrup, Riker Laboratories, Inc., Northridge, California. 1-phenyl-1-(1-chlorophenyl) - 3-dimethylamino - propanol - (1)-hydrochloride, generically termed "chlophedianol hydrochloride." For upper respiratory infections, common cold, influenza, pneumonia, bronchitis, laryngitis, croup, pertussis, pleurisy, tracheitis. *Dose*: adults, 25 mg. (one teaspoonful) 3 or 4 times daily as required. Children, 6-12 years, 12.5 to 25 mg. 3 or 4 times daily as required. 2-6 years, 12.5 mg. 3 or 4 times daily as required. *Sup*: 25 mg. per 5 cc. (1 teaspoonful) in bottles of 12 fluid ounces.

Ureaphil, Abbott Laboratories, North Chicago, Illinois. Anhydrous, lyophilized, sterile powder form of urea to be reconstituted with dextrose or invert sugar solutions for intravenous administration. May be employed in a variety of special circumstances in which prompt diuresis is desired, including cerebral edema, following burns (to counteract oliguria), following surgery or trauma, following prostatectomy, and edema due to cardiac surgery. Total dosage and concentration of Ureaphil are governed by severity of the condition being treated and may vary from 100 mg./Kg. of body weight to 1,000 mg./Kg. of body weight in desperate circumstances. For promotion of diuresis following surgery, burns or other trauma, a 4% solution w/v in 5% dextrose or invert sugar in water has shown satisfactory results. *Sup*: 40 Gm. Ureaphil in 250-ml. Abbo-Liter bottle.

Fostex[®] treats their ● ● ● ● ● ● ● ● ● ● acne while they wash



degreases the skin

completely emulsifies and washes off excess oil from the skin.

helps remove blackheads

penetrates and softens comedones, unblocks pores and facilitates removal of sebum plugs.

dries and peels the skin

removes papule coverings and permits drainage of sebaceous glands.

Patients like Fostex because it is so easy to use. They simply wash acne skin 2 to 4 times a day with Fostex Cream or Fostex Cake, instead of using soap.

Fostex contains Sebulytic[®],* a combination of surface-active wetting agents with remarkable antiseborrheic, keratolytic and antibacterial actions . . . enhanced by sulfur 2%, salicylic acid 2%, and hexachlorophene 1%.

*sodium lauryl sulfoacetate, sodium alkyl aryl polyether sulfonate and sodium dioctyl sulfosuccinate.

Fostex is available in two forms—



FOSTEX CREAM, in 4.5 oz. jars.

FOSTEX CAKE, in bar form.

Fostex Cream and Fostex Cake are interchangeable for therapeutic washing of the skin. Fostex Cream is approximately twice as drying as Fostex Cake.

Fostex Cream is also used as a therapeutic shampoo in dandruff and oily scalp.

Write for samples.

WESTWOOD PHARMACEUTICALS • Buffalo 13, New York

don't let medical control out of your hands during the critical newborn period

When you specify Vi-Sol drops you specify vitamins designed to help keep you in full control of the infant's medical care. Always professionally oriented, Vi-Sol drops are not only manufactured to meet your highest standards, but they are promoted only to you. You select the level of protection...Mother feels confident in your choice.

Hypoallergenicity is only one of many advantages of Vi-Sol drops. Outstanding hypoallergenicity has been achieved in three ways: First, great care is taken to select only the finest synthetic and natural raw materials. Second, during the manufacturing process extraneous allergens are excluded from the vitamin solutions. Third, constant quality controls attest to the absence of foreign materials in the finished products. This dedication to quality manufacturing assures dependable hypoallergenic formulations for the newborn infant.

VI-SOL® DROPS for assured hypoallergenicity

TRI-VI-SOL®
Drops

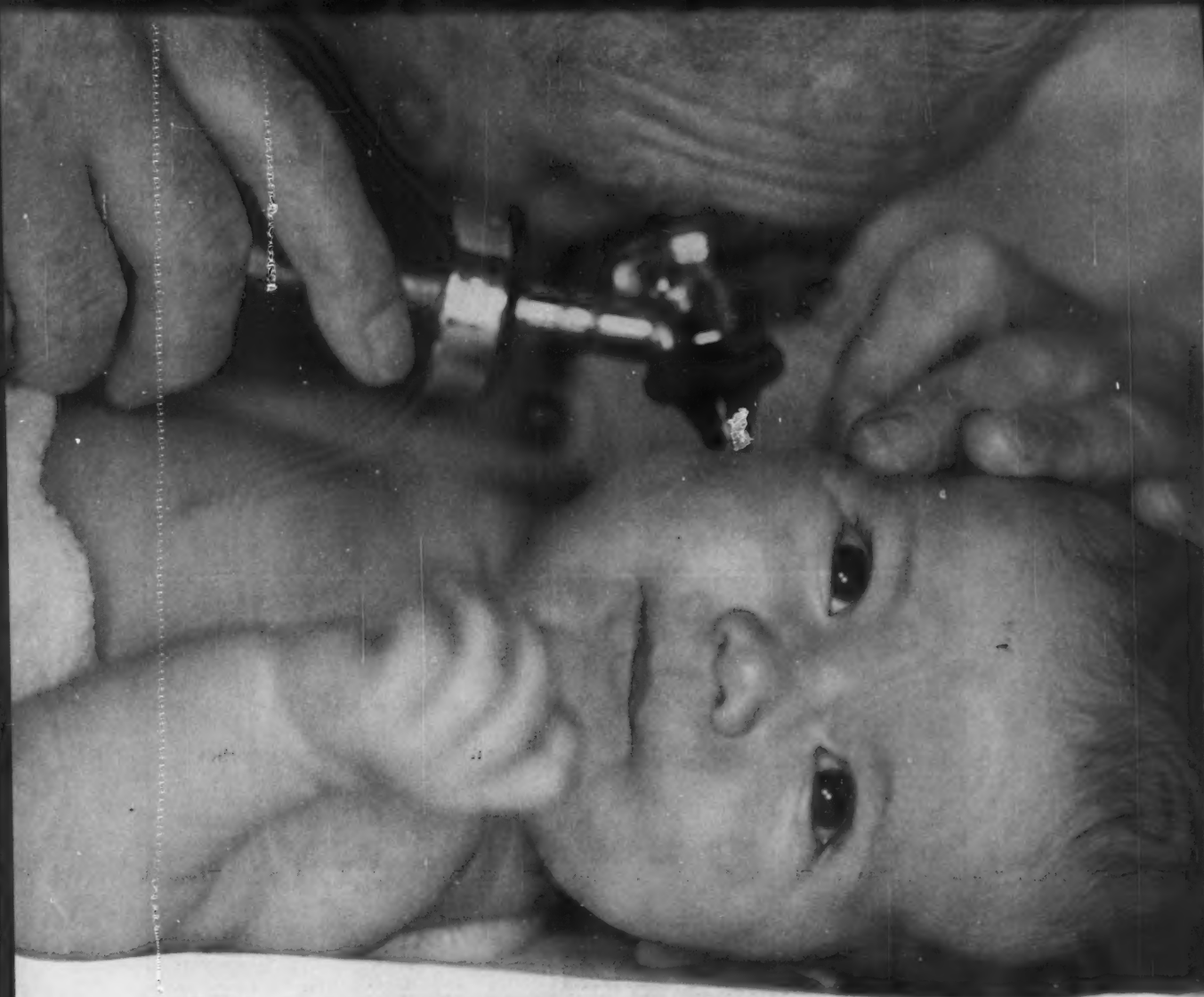
3 basic vitamins

POLY-VI-SOL®
Drops

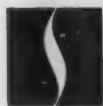
6 essential vitamins

DECA-VI-SOL®
Drops

10 significant vitamins



your professional control assures baby's good health
...mother's confidence



Mead Johnson
Symbol of service in medicine

in arthritis and allied disorders

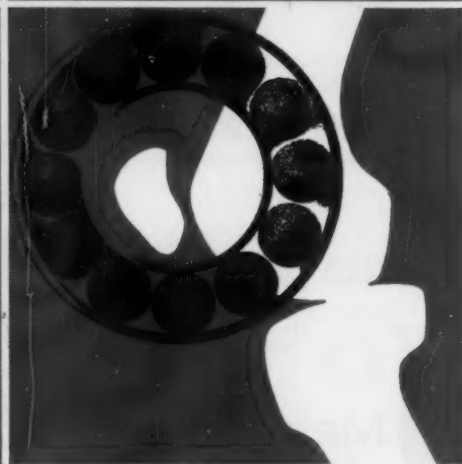
Butazolidin Geigy

Proved by a Decade of Experience
Confirmed by 1700 Published Reports
Attested by World-Wide Usage

Since its anti-inflammatory properties were first noted in Geigy laboratories 10 years ago, time and experience have steadily fortified the position of Butazolidin as a leading nonhormonal anti-arthritic agent. Indicated in both chronic and acute forms of arthritis, Butazolidin is noted for its striking effectiveness in relieving pain, increasing mobility and halting

Butazolidin®, brand of phenylbutazone:
Red, sugar-coated tablets of 100 mg.
Butazolidin® Alka: Orange and white
capsules containing Butazolidin 100 mg;
dried aluminum hydroxide gel 100 mg;
magnesium trisilicate 150 mg;
homatropine methylobromide 1.25 mg.

Geigy, Ardsley, New York



this hypertensive
patient prefers
Singoserp...
and so does
his physician



Photo used with patient's permission.

Patient's comment: "The other drug [whole root rauwolfia] made me feel lazy. I just didn't feel in the mood to make my calls. My nose used to get stuffed up, too. This new pill [Singoserp] doesn't give me any trouble at all."

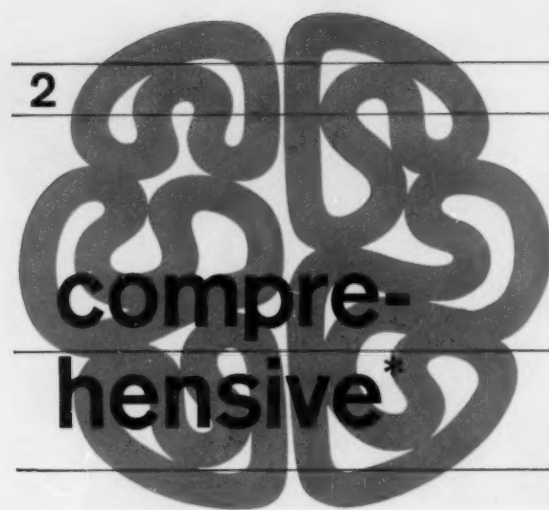
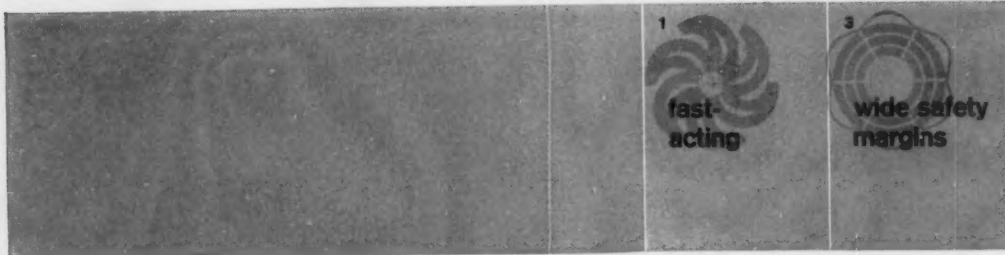
Clinician's report: J. M., a salesman, had a 16-year history of hypertension. Blood pressure at first examination was 190/100 mm. Hg. Whole root rauwolfia lowered pressure to 140/80 — but side effects were intolerable. Singoserp, 0.5 mg. daily, further reduced pressure to 130/80 and eliminated all drug symptoms.

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At the present time there are over 200,000 illegitimate children born each year in the United States. This involves predominantly young women, particularly teenagers. This represents a tripling in the rate over the past two decades. Although the white rate has not increased, the nonwhite has gone up tremendously. This may not reflect the true picture because many well-to-do white families may conceal the fact of the unmarried pregnant daughter.

The Family Physician and the Unwed Mother



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The problem of the unwed mother has many different facets, and society's reaction must be considered as one of these. There are distinct cultural differences contributing to this situation. In some parts of our society, it is quite common and not very reprehensible to be pregnant before marriage, although marriage usually results. The evidence seems to indicate that in the lower socio-economic groups, pregnancy before marriage is fairly common and less censured than it is in the middle class. This is not completely related to the incidence of premarital intercourse. Kinsey² states that there are different patterns of premarital sexual activity, depending upon the educational level from which the individual comes. His figures are that thirty percent of those with only a grade school education engage in premarital intercourse; in those with a high school education, forty-seven percent do; and in those with a college education, sixty percent. Nevertheless, a much greater number of unwed mothers come from the

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lower educational group. This may be related to less knowledge about contraception, less concern with social disapproval, or a higher incidence of emotional problems.

Etiology

As usual, when a problem is inadequately understood, there are dozens of theories to explain it, and unwed motherhood is no different. There are many commonly utilized psychological theories which purport to explain the whole problem; of course they do not. One authority indicates that illegitimate children are never accidental. She states that, "Everything points to the purposeful nature of the act. Although a girl would obviously not plan consciously and deliberately to bear an out-of-wedlock child, she does act in such a way that this becomes the almost inevitable result."⁴ To support her contention, she points out that many unwed mothers have had intercourse on only one occasion and become pregnant immediately and that they made no effort to use contraceptive measures. Another source states that these acts represent "an acting out of rape and prostitution fantasies."¹ Again, the statement is made that pregnancy is an effort to repair a poor mother-daughter relationship.³ The author states that if the girl becomes pregnant, she will place herself in a dependent position where her mother will again take care of her.

The implication of these theories is that every unwed mother has a deep emotional problem which drove her to the pregnancy. While this is often true, it would be overdrawing the situation to say that it is always so. The picture is much broader and more complicated than that. When almost fifty percent of the female population have premarital intercourse and therefore expose themselves to the possibility of unwed motherhood, it seems most unlikely that all of these people are mentally ill or have deep emotional problems.

Sexuality is a drive, a normal drive which occurs in the girl of high school age as well as in the adult. In fact, it may very well be a stronger drive at this time. Nature has made

woman ready for sex and capable of conception as early as adolescence. It is civilization that has imposed a waiting period of five to ten years. A young girl often does not have the emotional stability to withstand her natural biological urges and the stimulation and temptation that our society often provides.

In order to place the problem in its proper perspective, one must recognize that an illegitimate pregnancy can be the consequence of a simple accident. If unwed motherhood can be considered as resulting from either "accidental" or pathological causes, it will give us a more reasonable understanding of the situation.

Accidental

With the large incidence of premarital intercourse, it is inevitable that some pregnancies will result. Contraceptive means, if they are utilized, are known to be imperfect and, in any event, are often ignored. In support of the idea that pregnancies are never accidental, it has been stated that the girl does not use contraceptive devices even if she knows about them. Indeed, she does not use them; it is rather difficult to think of a fifteen or sixteen-year-old girl going to her physician and indicating to him that she wishes to have intercourse premaritally and would like to be fitted for a diaphragm. However, it is very easy for a boy or young man to obtain contraceptive devices. Consequently, the pattern for contraception in premarital affairs has been one of the man accepting the responsibility and taking the precautions. When he does not take these precautions, and when he easily could, then we must come to think of the psychopathology of the unwed father, which may be as or even more important than that of the mother. However, this is beyond the bounds of this paper.

The incidence of "accidental" pregnancies is probably much higher than we can determine. There are many cases of potentially unwed mothers who never come to our attention because marriage occurs after conception but before birth. Some estimates have indicated that as many as one in three marriages occur

under these circumstances. We also do not know how many abortions have been carried out.

Pathological

There are a number of girls who either engage in premarital intercourse and/or become pregnant because of emotional reasons.

1. **MENTAL ILLNESS.** Any of the mental illnesses may contribute towards a change in behavior or a lack in judgment or concern about the consequences of the act that results in pregnancy. Two conditions that are commonly found are those of schizophrenia and mental deficiency. A schizophrenic may present as a girl who seems to have little emotional concern about her situation, is often a bizarre, "peculiar" person who may have delusions of persecution, the belief that she has been impregnated by God, or other strange ideas. Certainly, this person is seriously ill and must be referred for specialized help immediately. The mentally deficient girl is one that has been taken advantage of. She has often been rejected and takes any way available that will give her pleasure and affection, without any regard or sometimes even knowledge of the possible consequences of her actions.

2. **THE AMORAL GIRL.** Most girls have the normal biological sex urges that nature has provided, but we hope that they will have the ability to control them. The amoral girl makes no effort to control her impulses and has no desire to do so. She enjoys sex and has no guilt feelings or moral restraints about it, so she participates quite freely. Often there is a history of a girl who has been promiscuous on short acquaintance, who engages in sexual activity with a very superficial relationship, who has gone from boy to boy and appears to be seeking only her own gratification.

She is not embarrassed or guilty about her present state. It appears as though she has no "conscience" to provide a brake on her activities. This may be the result of overpermissiveness on the part of her parents, or, on the other hand, rejection by very strict parents, where the patient could not have approval

whether she was good or bad so she might as well be bad. Since this girl has been promiscuous, she has not formed any deep relationships with the boy she goes with, she is not likely to find a man to marry her, and in any event is not very concerned about it.

3. **THE QUEST FOR LOVE.** These girls are looking for affection. Intercourse is one of the expressions of love. A deprived, emotionally starved girl may easily succumb to seduction because she feels that this means she is loved and desired. Here she can gain a feeling of security which she can get in no other way. Often she forms a relationship, and she is afraid that should she withhold intercourse when it is demanded, she has no other assets in herself and therefore must succumb to hold her man.

4. **INTERCOURSE AS A SOLUTION TO A PROBLEM.** As mentioned, intercourse may represent a quest for love. Many other unconscious feelings and desires may be acted out in this way. A deeply disturbed girl may have fantasies of rape and prostitution, and intercourse is a manifestation of these. A girl who feels inadequate and unsure of herself as a woman may use intercourse to prove to herself and to others that she is complete. She does not enjoy sex and goes from man to man looking for one who will finally give her pleasure and reassure her that she is normal. Of course, she almost never finds him in this way. A girl who has homosexual drives may attempt to prove to herself that she is not homosexual by excessive heterosexual activity.

One often finds a girl in her mid-teens involved with a man much older than herself. She may be attempting to make up for a poor relationship with her own father, and the male partner represents a father substitute. On the other hand, a girl who has had a relationship that was too close and seductive with her father and who has incest fantasies may attempt to deny them to herself by means of sexual activity with other men.

5. **MATERIAL GAIN.** This is a pitiful type of case. She comes from a low socio-economic level and has been deprived both emotionally

and materially during her life. She succumbs for the sake of a few luxuries which she cannot obtain in any other way. This is not the prostitute but simply the girl who can get a ride in a beautiful car and be taken to a nice restaurant but only on the condition that she "cooperate." The importance of these "small" luxuries can be seen when we see what happens in a wartorn country such as Europe where thousands of illegitimate children were the result of a desire for a pack of cigarettes or a part of a chocolate bar.

6. THE CONSCIOUS OR UNCONSCIOUS WISH TO HAVE A CHILD. The members of this last and most complex group are those who actually do wish to have the child itself. It may represent an act of hostility against the parents, a gesture of independence. This may occur where the parents have been excessively demanding or overprotective, particularly in the sexual area. They have attempted to keep her ignorant of sex in any form, have been excessively critical of any relationship she might have with a boy, and are very shocked, hurt and surprised to find out that their daughter is pregnant.

A girl often consciously attempts to become pregnant in an effort to keep the man she loves and force him into a marriage situation. It works very often.

Many girls have severe guilt, particularly about their own unacceptable sexual and hostile feelings. They feel that they are very sinful and wrong for even thinking or feeling this way, and this may drive them to commit the very act they are so afraid of. They deprecate and despise themselves. The disgrace and rejection that unwed motherhood implies is a form of self-imposed punishment.

The daughter may be unconsciously attempting to displace her own mother by providing her father with a child. This is much more likely to happen when an unhealthy close relationship with the father has been formed and no good identification has taken place with the mother.

The pregnancy may represent an unconscious attempt at regression, and the evasion

of responsibility, growing up and becoming independent. The pregnancy is a form of retreat in which the girl hopes to force the mother to again take care of her daughter and her problems. The patient's mother may often abet the action of her daughter to fulfill her own need for the baby. The frequency with which the patient's mother insists on keeping her daughter's child is testimony to this.

The Unwed Mother's Reaction

It must be emphasized that the cases where deep emotional problems exist are in the *minority*, and, consequently, our biggest concern is not with the etiology, except in those cases where it plays a very definite role. The primary concern, which is common to all of these cases, is the reaction that the unwed mother must have in response to her pregnancy.

The problem is that of a young girl, who is emotionally immature, about to have a baby under conditions which society and her family condemn. This is a difficulty that every unwed mother must face, one with which they all need help regardless of the cause of their situation.

Before discussing the reaction of the unwed mother, one must go into the reaction of any potential mother, because our patients are not only unwed but they are also pregnant, and sometimes this is forgotten. All women have a certain amount of anxiety about the ensuing delivery. Some of the common fears of pregnancy that women have are: 1) that they will die or be severely injured at childbirth; 2) that they may not be able to tolerate the extreme pain that may accompany childbirth; 3) that they will not behave in the approved stoical manner during delivery; 4) that the child may be dead or deformed; 5) the fear that pregnancy and birth will disfigure them permanently and that they will never regain their "girlish" figures,—they may very much resent the fact and consequences of pregnancy and the role they have been forced to play in it; 6) the loss of modesty during prenatal examination and during delivery can be most embarrassing and even traumatic.

Usually, to counteract these fears, she has the approval of her husband and family, the anticipation of the fulfillment of the woman's most important biological goal and the ultimate happiness of having her own child. The amount of anxiety that these worries produce depends, of course, very much on the patient's previous experiences. It will be related to the type of sexual adjustment, the amount of desire for the child, the security of her own family background, the number of old wives' tales to which she has been exposed, and the sadistic reports of older women regarding their own "alarming experiences" with pregnancy. These are the experiences that all pregnant women must face.

In the unwed mother we have a young, frightened, rejected girl who must face the same thing; without a loving husband, without the possibility of looking forward to the most joyous culmination of womanhood, with the anticipation of shame, with no positive goal at the end of nine months of fear and possible suffering.

Under normal circumstances, pregnant women are inclined to be tearful, self-conscious, and supersensitive to criticism. Often they are irritable, demanding, self-pitying and self-depreciatory of their own so-called disfigurement. We can expect all of these changes to an even more pronounced degree in the unwed mother.

We may be deceived in the early months by the sense of well-being that is so common in pregnancy. There is a satisfaction with the mother role she is to play, and this is probably aided by the physiological changes that occur at this time.

However, as the pregnancy proceeds, the denial that has been utilized fails because the patient is now obviously pregnant to herself and others. Soon she must face the birth of the child, the loss of the child, and her return to society. The patient's fear regarding birth will be augmented as these events become imminent. The patient may become quite, and even dangerously, depressed as she is confronted with these realities.

Management

The patient is most often frightened, guilty and ashamed. Occasionally she may be hostile and defiant, or sullen and withdrawn. This is likely a facade to handle her anxiety and expected rejection.

She may come asking for an abortion, unaware that other types of help are available. She is usually happy to accept the alternatives the physician has to offer. The doctor is the first source of help, and his manner and effectiveness in the very first interview can be crucial. If she leaves the office without help, the next step may be the abortionist. Occasionally, suicide is the only solution she can see.

The girl must be made to feel that here is someone who cares. The physician must not pass judgment about the moral aspects of the situation. He should be warm and accepting but not oversympathetic or gushing. He should communicate an air of confidence and optimism but not avoid discussing the real difficulties that are present.

It is important to learn a great deal about the patient in order to help her effectively. Is this an "accidental" or pathological situation? Inquire into her pattern of sexual behavior. The range is very wide. There is the girl who has had her first sexual experience with her fiancé. When he was killed shortly afterwards in a car accident, she found herself pregnant without a husband. At the other end of this scale is the deeply unhappy girl who has been widely promiscuous as an expression of rebellion and in an effort to find love she has never known.

Does the patient show signs of mental illness that require specialized help? Is she depressed to the point that suicide is a possibility? Does she have the stamina and intelligence to carry out any plans that can be made for her?

Try to evaluate her assets and liabilities. In what manner has she withstood stress in the past? Are these healthy methods? Has the patient, when in difficulty before, buried herself in her work, studied harder, talked things out, or does she have pathological defenses such as withdrawal, aggressive acting out, or

even frank mental illness? There is a good chance that she will attempt to handle this stress situation in the same way she has handled others in the past.

The patient will have anxiety in relation to the pregnancy and delivery. A thorough physical examination will give the physician confidence which he can pass on to the patient. She should be given an opportunity to voice her fears, doubts and misconceptions in warm, reassuring atmosphere.

Has the girl told her family? With very few exceptions, they should know. If she feels too frightened or ashamed to do it herself, then an office conference should be arranged with the patient and the mother and father. Insufficient attention has been paid to the families of unwed mothers. In their rejection, they represent the greatest stress the patient has to bear, and yet her own family may be potentially the greatest source of help. The girl, in her shame and grief, may not give the family the opportunity to offer the help that they are only too willing to provide. When they first learn of the pregnancy, they may be shocked, ashamed and angry. Even though it is usually not their own failure, they feel this deeply and personally. It is at this time that their greatest failure may occur; the rejection of their woman-child at a time when she needs them most. These parents may need to be interviewed to help them dispel their own guilt feelings, to have a chance to talk out their own anxieties and reactions to the situation. Once confronted with the fact and given an opportunity to work it out, they almost invariably rally to the aid of their child.

Further help is needed, particularly when

the family is not available. The reality problems must be confronted and at least tentative solutions arrived at during the first visit. What is the financial situation? Does she have a job? How long will she be able to work? Where will she have the baby? These are questions that must be answered. A social welfare agency, when available, can be of great assistance here. Her own church may be able to provide aid. Salvation Army and other hospitals for unwed mothers do a fine job.

The Baby

There is a natural maternal urge to keep the baby, but reality factors make it almost impossible for either the baby or the mother to lead a normal life if they stay together. Society will censure and reject both of them. The child would lose the father and the security that adoption could provide. The mother will probably have to work, and so the child loses a normal mothering too. It will be difficult for the mother to find a husband, particularly one who can really love the child. The stress of the mother's sacrifices often results in the very thing the mother was hoping to avoid—her own rejection of the child. With very few exceptions, it is not wise for them to remain together. Most unwed mothers can accept the separation, however painful, when they have examined the implications of such a decision. However, in those in which pregnancy represents an attempt at a solution of a conflict, this may be a painful decision indeed. Certainly one of the goals of working with the patient is an attempt to work out this pathological need which can only result in grief for both of them later.

Summary

Unwed motherhood is a tragedy. However, the most critical events will be those which occurred not before the pregnancy but during and after it. It is a stress, the pain and damaging effects of which can be sharply curbed

and which can be the beginning of a new, more fruitful and happy existence.

The family physician, who is in most intimate contact with this problem, can be crucial to its outcome.

Bibliography

1. Eisenberg, Morton, M.D.: *Psychodynamic Aspects of Casework with the Unmarried Mother*, Casework Papers, 1956.
2. Kinsey, Alfred C.: *Sexual Behavior in the Human Female*, W. B. Saunders Company, 1953, Philadelphia.
3. Littner, Ner, M.D.: *The Natural Parents, A Study of Adoption Practice*, Edited by Schapiro, Michael, Volume II.
4. Young, Leontine: *Out of Wedlock*, McGraw Hill Book Co., Inc., 1954, New York.

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SERUM INSULIN IN SEVERE DIABETES MELLITUS

A case of severe diabetes in a young adult is described, presenting with ketosis, in whom apparent clinical remission took place.

Serum insulin studies have suggested that in the initial ketotic phase insulin was present, though its effect was masked by the presence of an antagonist. With remission of the diabetes the insulin antagonism disappeared.

The possible bearing of these findings on some aspects of the aetiology of human diabetes is discussed briefly.

ADDENDUM: *While this paper was in preparation, observations became available on circulating insulin in the serum of an insulin-resistant patient who also showed remission (Joslin, Root, White, and Marble, 1959). In this patient, who was maintained on a very small dose of injected insulin, whole serum, taken in remission, exhibited considerable insulin-like activity, as measured by effects on $^{14}\text{CO}_2$ production in the rat epididymal fat pad. These observations are in keeping with results presented in this paper.*

K. W. TAYLOR, M.A., PH.D., M.B., B.CHIR.
Brit. Med. J. (1960), No. 5189, Pp. 1855-1859.

CAUSE AND TREATMENT OF

HOSPITAL OVER-USE

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In recent months, a great deal has been said and written about the increase in demands for hospital bed space due to increased use or over-use of hospital facilities.

Much of what has been said is uninformed opinion and some of it is hysterical in nature. It has led to proposals for methods of policing hospital admissions, by physicians or other interested parties, which are not only not feasible but impossible to implement properly. It has led to proposed legislation for the control and management of prepayment hospital and medical insurance plans by so-called disinterested agencies; the personnel of such agencies would necessarily have no knowledge of the special problems involved and less qualification for coping with them than the people who are administering them at present. It has led to the offering to the public of prepayment insurance plans which provide only partial financial coverage, often after a deductible minimum, regardless of the type of illness concerned. Such plans defeat the basic purpose of prepayment insurance, which was originally designed to protect the patient completely against financial loss due to catastrophic illness of a type for which he must necessarily be unprepared.

All of this presupposes that the doctors, the patients, or both are responsible for this over-use of hospital beds and indeed, this must necessarily be so. However, we have heard precious little in the line of accurate, well

substantiated statistics as to how the hospitals are being used.

This whole situation deserves more careful analysis to determine (1) which hospital facilities are flexible enough to be subject to over-use, (2) what types of illnesses fall into the category of "unnecessary" hospital admissions, (3) what type of physician is guilty of commission of, or permission for, this practice. It is felt that some light may be shed upon this problem by a hard, careful look at the functions, past and present, of a typical small suburban general hospital.

Our hospital has a capacity of two hundred and thirty-six beds, exclusive of bassinets, and has four solaria which can accommodate a total of sixteen patients and which can be pressed into service in cases of emergency. It is a fully accredited hospital. The doctors on our staff are well trained and carefully selected. In the years to be considered (1948-1958 inclusive), it happens that exactly as many physicians with surgical privileges as with medical privileges have been added to the staff. Sixty to eighty percent of our patients have some type of prepaid hospital and/or medical insurance.

Examination of numerical admissions is revealing. A majority of hospital admissions is surgical. In recent years, the surgical census in hospitals has risen due to three factors: (1) increase in population in the area served by the hospital; (2) increase in age of patients

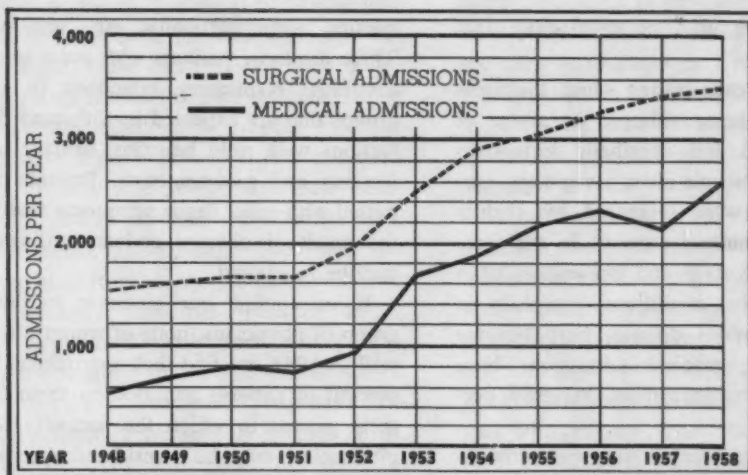


FIGURE I

who, due to improved medical and anesthetic techniques, are considered acceptable surgical risks; (3) extension of areas of surgery, especially vascular, thoracic, and neuro-surgery, which would not have been attempted at all twenty-five years ago and are now considered within the scope of small hospitals with superior staffs.

Figure I shows graphically the increase in numbers of surgical patients over the years. The rise in 1952-1953 occurred when we moved into a new larger hospital. Aside from that jump, it is seen that the increase in surgical admissions has been at a steady rate and, within the framework of our existing facilities, should be accurately predictable. The total surgical admission rate has slightly more than doubled.

Of course, there are some circumstances permitting overuse of hospitals on the part of the surgeons. A fractured clavicle or forearm may be hospitalized for a few days which are not essential to patient care; a basal cell epithelioma may be hospitalized rather than having the lesion cared for on an out-patient basis; a patient may be kept in the hospital while a postoperative course of radiation is being given. However, it appears that this represents a relatively small percentage of the total surgical census and that the increase in

surgical patients has been at a steady rate. Nearly all patients admitted to the Surgical Service, other than traumatic, are admitted for and undergo surgery.

The demands of the obstetricians for beds are similarly predictable and the increases would be related only to population increases. Pediatrics in most hospitals is in a separate department, restricted only by its own space and its census does not reflect crowding of the hospital as a whole.

It appears then that whatever flexibility the hospital has or is going to have in terms of overcrowding is a function of the number of medical patients admitted and cared for in the hospital.

Figure I also shows the number of medical admissions to the hospital during the same period. It will be seen that medical admissions increased more rapidly than surgical admissions, and have approximately quadrupled. Considering for the moment the total of medical and surgical admissions alone, it is shown that in 1948 medical admissions comprised 28.7 percent of this total. During the next few years this percentage gradually rose and since 1954, the percentage has been above forty. In my opinion, the percentages of medical admissions would have risen even higher if it were not for the fact that bed space, even in a new

hospital, has been at a premium since that time.

Hence, in a decade during which the areas of surgery were being enlarged by virtue of improved surgical and anesthetic techniques and increased to include older age groups, surgical admissions were increased by slightly more than one hundred percent. In the same decade, when the care and prevention of a great many medical conditions, especially in the area of infectious disease, have become greatly simplified, medical admissions have increased by more than four hundred percent.

In an attempt to ascertain the types of medical admissions which were responsible for this increase, a study was made of all the medical admissions by general practitioners and internists over a period of fourteen months, ending in early 1959. Careful analysis of the insured patients as opposed to the private patients of the doctors involved shows remarkably little variation in type of diagnosis or duration of hospitalization. In other words, the doctors in this hospital are not consciously abusing the prepayment insurance plans but are practicing medicine according to their lights, either as they have been taught or as they have found to be most effective in the past. Nevertheless, there is a remarkable variation among them.

The doctors who admit the fewest patients either have patients with very short hospital stays or patients who are very ill. In general they are the older men on the staff. These doctors have large private practices. In general they know what their patients have, admit them only for the treatment of the acute disease, or to rule out a possibly more malignant one. It is obvious that they treat a great many patients at home who would be hospitalized by some other physicians.

There is another group that appears to practice a different type of medicine. The period of observation of the patient before hospitalization is shorter. The pre-admissions diagnosis is somewhat more likely to be less accurate and more vague. Patients with acute musculoskeletal problems — low back strain, acute

bursitis, acute torticollis, etc., are admitted. There are more patients with acute infections: tonsillitis, respiratory infections in the age groups that are expected to withstand these infections well, mild hepatitis, urinary tract infections and gastroenteritis. Patients are admitted with mild, vague symptoms that may be the result of obscure endocrine disorders or may be functional.

If we confine our attention to this latter group of physicians, none of whom was on the staff in 1948, we find that approximately forty percent of patients admitted by them fall into these groups in which the necessity for hospitalization may be considered questionable. These break down roughly as follows: respiratory thirteen percent, musculoskeletal disorders seven percent, gastroenteritis and undiagnosed abdominal pain six percent, anxiety state five percent, and chronic or subacute pancreatitis 1.5 percent. This is in marked contrast to the patients admitted by doctors all of whom were on the staff prior to 1948. Only eight percent of their patients can be considered to fall into all of these categories. Interestingly enough, if one subtracted the number of medical admissions represented by the thirty-two percent, difference between these two groups, the medical admissions would have been thirty-two percent of the total in 1958 as opposed to the 40.5 percent that were actually admitted.

There then is a group of medical patients who are now admitted to the hospital, largely by men who have been in private practice less than ten years, patients with illnesses which formerly were not thought to require hospitalization and which are still not so considered by men who have been in practice longer. In our hospital at least, the young physicians are almost exclusively those with specialized training in Internal Medicine. Their training and background are directly conducive to this type of patient management. They received their training in large metropolitan teaching centers. Their only contact with the types of illnesses mentioned has been in hospitalized patients. They have seen teachers and doctors connected with those centers admitting

these types of patients, either for teaching purposes or because such physicians do not frequently make house calls. After their training, the young doctors migrate to suburban or rural areas and continue to practice medicine as they have seen it done. It has not been brought to their attention during their training that in many parts of the country these patients are not hospitalized. They have not been taught that in every patient the doctor should squarely face the question as to whether any benefit would accrue to the patient in the hospital that would not obtain, if he were cared for elsewhere. They have usually never made a house call in their lives, much less cared for patients in the home.

Furthermore, it seems to me remarkably significant that everyone of these doctors had served in the Armed Forces, an atmosphere in which the alternative to full duty is usually hospitalization. This process further conditioned their thinking against any type of out-patient care.

The number of these young internists has been increasing as the number of general practitioners decreases. They are gradually taking over the role of the family doctor. This role and their philosophy are changing hospital usage; the older internists did not have at their disposal enough beds to function in this way, and the general practitioners, both the older ones and the relatively few, young, well-trained ones who have recently started in practice, have been taught to regard hospitalization as a sometime necessity, not as a convenience, luxury or standard *modus operandi*.

It should be noted that there are factors promoting the more extensive use of hospitals in the large cities than in the rural areas. A larger proportion of people working in cities have prepayment group insurance in connection with their employment and have taken it for granted that this coverage includes hospitalization for any and all illnesses. Furthermore, there are socio-economic pressures directed toward hospitalization upon both the physicians and patients in the cities where a

larger percentage of people are out of the home most of the time and where doctors' schedules are such as to make care outside of hospitals less feasible. In addition, living conditions in the cities are often less suitable for home care. All this is reflected in the fact that most instances of division between hospital administrators and physicians on the one hand and insurance companies on the other have occurred in the large cities. It seems apparent that whatever praise or blame there may be for extended hospital use in suburban areas falls upon the heads of the medical personnel in the teaching centers rather than upon the heads of the young doctors who migrate from those centers to the rural or suburban areas.

Whatever the cause, we must accept certain consequences of hospital admission of groups of patients in which the medical advantages of and the necessity for hospitalization may be debatable.

One of these is a spiraling increase in the cost of prepayment hospital insurance. Another is a constant increase in the number of hospital beds in demand in any given area, which will occur even in areas whose population growth is relatively slow and which will, of course, be greatly augmented in all our rapidly growing suburban areas.

If this analysis is accurate and representative and the increase in use of hospital facilities is largely a function of medical hospital admissions as opposed to surgical, obstetrical and pediatric, it follows that most of the proposals offered for the correction of over-use of the hospitals and for the solution of the attendant insurance difficulties are invalid.

I have made no mention of the length of hospital stay as a contributing factor in hospital over-use. The data at my disposal are such that any estimation of this could only represent a personal opinion in each individual instance based upon chart analysis and would have no validity. Similarly, I have omitted Pediatrics from this study because I do not feel personally qualified to pass upon the necessity for hospitalization in that department. As an internist, however, who was

chairman of the Committee on Hospital Admissions during the period in question, I believe that the foregoing analysis based on Medical Admissions is objective and fair.

If hospital over-use is, for the most part, due to the admission of certain groups of medical patients, prepayment insurance plans which offer partial coverage for all types of illness do not solve the problem, nor are they equitable. Certainly patients with meningitis, poliomyelitis, myocardial infarction, bleeding peptic ulcer and numerous other medical conditions, as well as those patients upon whom surgery is performed, should be completely covered. This is precisely the type of situation for which prepayment insurance was devised. The dividing line should be between the patients for

whom hospitalization is an unquestioned necessity and those for whom it is a convenience, a desideratum, or an elected maneuver. It seems to me that the most acceptable type of insurance would offer complete coverage for the first group, and less coverage than is presently supplied for the second. By "less coverage," I mean a larger deductible component and a smaller percentage of hospital cost coverage after the deduction. This would force a longer look on the part of both patients and doctors at the necessity for hospitalization in precisely those areas in which its value is questioned. And it would permit prepayment insurance companies to offer policies on a sound actuarial basis without fear of interminably rising costs.

Summary

An analysis of medical and surgical admissions to an accredited community type suburban hospital from 1948 through 1958 is presented. A discussion of successive medical admissions over fourteen months, late in this period, is also made. It is suggested that over-use of hospitals, as far as admissions are concerned, is largely a function of patients, with

certain groups of medical conditions in which the necessity for hospitalization may be questioned, admitted to the Medical Service by the more recently trained Internists. These groups are discussed. A proposal is made for more nearly equitable distribution of prepayment insurance benefits based upon these findings.

54 Green Avenue



MEDICAL TEASERS



A challenging crossword puzzle for the physician.

SEE PAGE 43a

Cutaneous Reactions to Light

Various types of light-sensitive eruptions are reviewed and a classification given. Some comments concerning therapy have been made together with possible etiological mechanisms.

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Coincident with the annual migration of Americans from the cities to the seashore, mountains, and lakes, there occur vast numbers of undesirable reactions to sunlight. Most are simple cases of sunburn but a few patients with rarer diseases are seen. The variety of disorders associated with exposure to sunlight may be summarized in Table I.

A review of the salient features of these dermatoses as well as a summary of more recent knowledge concerning them follows.

Physiological Reactions

SUNBURN, instead of the desired tanning, is the most common of all the effects of sunlight which bring patients to the physician. Prevention of sunburn may be achieved by limiting exposure to short periods for the first few days, by using topical sunscreens, or both. Sunscreens act by mechanically preventing light from reaching the skin (pigments such as titanium dioxide, zinc oxide, etc.) or by selective absorption of erythema producing rays (2800-3100 angstroms). Sweat and the stratum corneum of the epidermis are in themselves effective absorbers of rays in this portion of

the electromagnetic spectrum. Methyl salicylate, paraminobenzoic acid and digalloyltrioleate are efficient screens which may be incorporated into topical vehicles.

Although in theory, the erythema and tanning spectra are not exactly coincident, for all practical purposes, it is not possible to prevent erythema without filtering out the tanning rays also. Window glass, which filters out all rays shorter than 3100 angstrom, effectively prevents all erythema and tanning attributable to ultraviolet light. Recently, there has been great clinical and experimental interest in psoralen compounds, specifically 8-methoxypsoralen, as potential systemically administrable protective agents against sunburn. While many individuals have testified to increased tanning and decreased burning while taking 8-methoxypsoralen, carefully controlled studies have failed to confirm any statistically significant protection.¹ An increase incidence of carcinogenesis has been shown in animals given psoralens and exposed to ultraviolet light.²

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TABLE I CUTANEOUS REACTIONS TO SUNLIGHT

- I. **PHYSIOLOGICAL REACTIONS**
 - A. *Sunburn*
 - B. *Tanning*
- II. **ACUTE PATHOLOGICAL REACTIONS**
 - A. *Those Associated with Systemic Disease*
 1. Porphyria acuta (bullae)
 2. Porphyria cutanea tarda (bullae, hyperpigmentation)
 3. Systemic lupus erythematosus (erythemas, urticaria)
 4. Discoid lupus erythematosus
 5. Dermatomyositis (erythemas)
 - B. *Due to ingested photosensitizers*
 1. Foods (Furocoumarins—celery, etc.)
 2. Drugs (phenothiazines, sulfonamides, dimethylchlortetracycline, griseofulvin, etc.)
 - C. *Photocontact Dermatitis*
 1. Medications (antihistaminics, phenothiazines, sunscreens)
 2. Perfumes
 - D. *Solar Urticaria*
 - E. *Polymorphic light Eruptions*
 1. Plaque-like
 2. Papular-erythematous
 3. Prurigo-eczematous
- III. **CHRONIC PATHOLOGICAL REACTIONS**
 1. Basophilic degeneration of collagen
 2. Actinic keratoses
 3. Telangiectasis and hyperpigmentation

Although useful in some instances of vitiligo, their general use is not recommended at this time. Through the studies of Lerner and others,³ the physiology of tanning is now well understood and will not be reviewed here.

Acute Pathological Reactions to Sunlight

Several acute systemic disorders are frequently either increased in severity or precipitated by sunlight exposure. PORPHYRIA ACUTA is manifested in infancy by the appearance of bullae on exposed surfaces. Bones, teeth, and urine commonly fluoresce reddish-brown in these patients. *Porphyria cutanea tarda*, a disease most commonly seen in middle-aged males, is likewise characterized by the appearance of bullae on exposed surfaces. In addition, a peculiar dusky hyperpigmentation and absence of gray hair are frequently seen. An

alcoholic history is not uncommon. SYSTEMIC LUPUS ERYTHEMATOSUS (Fig. 1) may present with urticaria, erythema, punctate hemorrhages, an exaggerated sunburn reaction, or less commonly, with lesions typical of discoid lupus. These patients usually are febrile, experience malaise, and exhibit characteristic L.E. cells in incubated serum. Leukopenia is frequent. Lesions are often not confined to exposed areas even when precipitated by sunlight. The lesions of DISCOID LUPUS ERYTHEMATOSUS (Fig. 2) are often typical, consisting of discrete, erythematous, scaling lesions with central scarring and follicular plugging with an active, raised border. Malar areas, ears and bridge of the nose are favorite sites. DERMATOMYOSITIS occasionally presents with an exaggerated sunburn reaction. Edema, especially periorbital, is pronounced, and transient erythemas of extensor prominences are common. More specific changes including poikiloderma are later findings. When suspected, each of the systemic disorders considered above, with the possible exception of discoid lupus erythematosus, possesses a sufficiently grave prognosis to warrant hospitalization for confirmation of diagnosis and initiation of therapy. Treatment must be individualized and a discussion thereof is beyond the scope of this review.

INGESTED MATERIALS, both foods and medicines, may occasionally act as photosensitizing substances. Eruptions induced by these substances usually involve all light exposed areas simultaneously and are most frequently erythemas, maculopapular eruptions or manifested as exaggerated sunburn reactions (Fig. 3). Several pharmacological compounds possess potential photosensitizing properties. The classical drugs possessing photosensitive properties are the sulfonamides. Others are, most phenothiazine compounds, which include many tranquilizers, and the antibiotics dimethylchlortetracycline and griseofulvin. Drug eruptions regress promptly upon cessation of the responsible agent. Photosensitive reactions have little association with other side effects attributed to these compounds. Rarely, constituents of foods, especially coumarins contained in various vege-



FIGURE 1 Systemic Lupus Erythematosus.

FIGURE 2 Discoid Lupus Erythematosus.



FIGURE 3 Sulfonamide Photodermatitis.





FIGURE 4 Plaque-Like Eruption.

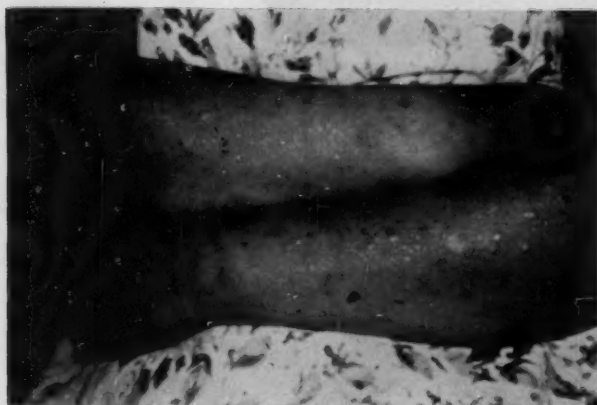


FIGURE 5 Prurigo Eruption.



FIGURE 6 Prurigo Eruption.

tables such as celery and spinach, may produce similar eruptions, especially when larger than normal quantities of these foods are eaten. Again, symptoms cease shortly after ingestion of these foods is stopped.

PHOTOCONTACT DERMATITIS is most commonly associated with two groups of substances: applied medications, such as some antihistaminic creams, and certain perfumes and colognes (so called berloque dermatitis). These reactions are limited to the sites where such photosensitizing substances are applied and consequently often assume bizarre patterns. The clinical appearance is usually that of erythema or an eczematous reaction. The acute phase is often followed by irregular hyperpigmentation of the area. Oddly enough, the various sunscreens used to prevent sunburn may, on occasion, be photosensitizers. Unlike the sunburn reaction, which is always elicited by the ultraviolet portion of the electromagnetic spectrum, the light dermatoses produced by the various contact and ingestion photosensitizers are usually provoked by the wave-length of light which coincides with the absorption spectrum of the offending chemical compound. These frequently are within the range of visible light and, hence, may occur from exposure to the sun through window glass or even to artificial light. Although removal of the causative substance prevents intensification of the eruption, those which are eczematous in nature usually require specific topical therapy as well as the systemic use of antihistamines to produce prompt resolution.

SOLAR URTICARIA is a condition usually considered to be a physical allergy along with cold urticaria, heat urticaria, etc. In this condition, urticaria appears on exposure to certain wave-lengths of light (usually 3900°A) on not only exposed areas but on covered areas as well. In most cases, the presence of circulating antibodies may be demonstrated, by passive transfer. Such antibodies, as a feature of light sensitivity, have been consistently detectable only in solar urticaria. Although antihistamines may afford partial symptomatic relief, avoidance of the eliciting light is the only proven preventive

measures. So-called "desensitization" by increasing exposures to the wave-lengths responsible has not been productive of impressive results.

POLYMORPHIC LIGHT ERUPTIONS comprise a group of interesting dermatoses confined to the skin. Originally described by Lamb and his associates,⁴ in 1940, these dermatoses can be classified into four basic types: plaque-like, erythematous, prurigo, and papular-eczematous.

PLAQUE-LIKE POLYMORPHIC LIGHT ERUPTIONS are the most frequently encountered (Fig. 4). Seen principally in adults, and somewhat more commonly in females, this disorder is characterized by an erythematous, edematous, well circumscribed, slightly pruritic plaque appearing usually on the cheeks, but also on other areas, after either the first exposure each summer or any intense exposure to sunlight. Usually elicited by the ultraviolet portion of the spectrum, these lesions are few in number and frequently are solitary. Plaque-like eruptions nearly always respond promptly to low systemic administration of antimalarial compounds and may be prevented in most patients by the use of a simple sunscreen such as ten percent para-aminobenzoic acid in a vanishing cream base applied before each exposure to sunlight.

ERYTHEMATOUS LIGHT ERUPTIONS are much less frequently encountered and may be mistaken for an exaggerated sunburn reaction. Although less well characterized, these reactions, like the plaque-like eruptions, usually respond to administration of antimalarial compounds.

The **PRURIGO** (Figs. 5, 6) and **ECZEMATOUS** (Fig. 7) light-sensitive eruptions have been the source of considerable controversy and more misunderstanding. This is probably because of the frequency of eczema and pruritus as a cutaneous symptom from countless other causes. Also, the diagnosis "light sensitivity" is very attractive to a physician when the alternative is "neurodermatitis," "xerosis," or "contact" to some undemonstrable substance. It is this author's opinion that a primary eczema-

tous reaction to sunlight is quite rare. Prurigo, as a primary reaction to sunlight, when it does occur, often progresses rapidly to an eczematoid state. That pruritus may occur as a primary reaction to sunlight has been repeatedly demonstrated both here in Oklahoma by Lain, Lamb, Everett, et. al.⁴, as well as more recently in Florida. Oddly enough, this has been reported especially in dark-skinned individuals rather than the fair-skinned, usually exhibiting the other light-sensitive eruptions. Eczematous and prurigo eruptions are uninfluenced by antimalarials and are little affected by ordinary sunscreens. These facts suggest both a different eliciting wave-length and mechanism of action for this type of eruption. The clinical diagnosis must depend therefore on constant association of symptoms with exposure to sunlight and the



FIGURE 7 Eczematous Eruption.

absence of other possible etiological agents (contactants, etc.).

Chronic Reactions to Light

CHRONIC ACTINIC DAMAGE occurs, as is well known, in persons exposed to bright sunlight over a period of many years, especially if they are fair-skinned. Actinic (senile) keratoses,

because of their common progression to squamous-cell carcinoma, should be destroyed when detected. That other manifestation of excessive exposure to sunlight, basophilic degeneration of collagen, although cosmetically unattractive, is insufficiently understood, and therefore unequivocal statements as to its true pathophysiological significance are not possible.

Conclusions

1. *Pathological reactions to sunlight exposure are frequently encountered in clinical practice especially during the summer months.*

2. *Those eruptions associated with systemic disease (lupus erythematosus, etc.) comprise a significant proportion of all light eruptions and each patient should therefore be examined with the possibility of systemic illness in mind.*

3. *While light-sensitive eruptions usually are limited to these areas of the skin exposed to the light this is not invariably true.*

4. *Drugs being taken by the patient, as well as foods in rare cases, provide the basis for light sensitivity in a certain number of patients.*

5. *Applied medications and also cosmetics may result in bizarrely shaped photosensitive reactions.*

6. *The polymorphic light eruptions mostly respond to systemic administration of anti-malarial compounds and the application of sunscreens (plaque-like eruptions and erythema solare) while a few do not (prurigo-eczematous reactions and solar urticaria).*

7. *Chronic damage from excessive sun exposure is common and because of its association with carcinoma in fair skinned individuals preventive measures should be taken.*

Bibliography

1. Daniels, Farrington, Jr., et al: "Field Trials of the Suntan Promoting Effects of Methoxselen," *Jour. Invest. Derm.* 32:321-329, 1959.

2. Griffin, A. Clark: "Methoxselen in Ultraviolet Carcinogenesis in the Mouse," *Jour. Invest. Derm.* 32:367-373, 1959.

3. Lerner, Aaron B.: "Melanin Pigmentation," *American Jour. Med.* 19:912-924, 1955.

4. Lamb, J. H., et al: "Solar Dermatitis," *Arch. Derm. and Syph.* 62:1, 1950.

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Clinical Cardiology in the Geriatric Age Group

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"And truly there goes a great deal of providence to produce a man's life unto threescore: there is more required than an able temper for these yeeres."

SIR THOMAS BROWNE, RELIGIO MEDICI.

The cardiovascular system starts to grow old at a remarkably early stage in our lifetime as far as most of us are concerned, and there is good pathologic evidence that significant arteriosclerosis and atheroma may be present in the third decade of life. These aging processes are usually complete by the sixth decade, and the greater part of cardiovascular disease in older people is due to, or aggravated by, degenerative changes. Little is known as to the causation of these changes, or why the velocity of this type of aging varies from person to person. It may be that genetic makeup plays a part. Some individuals through a fortunate, though fortuitous, selection of ancestry maintain their cardiovascular system in reasonable order. This could be due to an inherited ability to metabolize fat more efficiently, but many other factors may apply, and the whole problem is a challenge to research.

This paper cannot include all aspects of geriatric cardiology and deals only with some features of practical value in diagnosis and therapy. For example, certain forms of congenital heart disease may occur in old people, mostly as clinical curiosities. These are only exceptionally remediable. Other than diseases attributable to degenerative changes in the cardiovascular system, certain conditions are dealt with which are not usually associated with old age.

Hypertension

One of the difficulties in geriatric cardiology has been the definition of significant hypertension. Innumerable old people have been condemned to invalidism on the basis of a false interpretation of blood pressure recordings, and it is likely that our criteria have been too stringent in the past. Several recent studies, especially those of Master, et al.¹ have indicated that a blood pressure of 180/100 may be within normal limits for a patient over the age of seventy. Most so-called hypertension in old people is evidence of the aging process, with a resultant decrease in vascular

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elasticity giving rise to a disproportionate elevation of the systolic pressure. Diastolic elevation of blood pressure beyond 100 mm.Hg. usually indicates essential hypertension, and is associated with radiologic and cardiologic evidence of left ventricular hypertrophy. Severe hypertension is so rare in the older individual, *de novo*, that when it occurs, unilateral renal disease must always be excluded. This may be due to an atherosclerotic plaque or a thrombus in a main renal artery, and aortography may be required to demonstrate the lesion.

The decision to treat hypertension in an older patient may be difficult in the first instance, unless there are definitive signs and symptoms of cardiovascular involvement. However, it is probable that lowering the blood pressure to levels more compatible with normality may be beneficial in the long run. When severe hypertension is present, there is no reason to employ forms of therapy that are different from those used under similar circumstances in other age groups. In general, however, the usually mild hypertension that is found can be treated effectively with the rauwolfia group of drugs. Apart from the effect of lowering blood pressure, such drugs usually have a beneficial sedative action, although confusion and depression may occasionally occur. Rapid lowering of the blood pressure may be deleterious to such patients, who often enough have potential cerebral and coronary vascular insufficiency. Most cardiologists are aware of cerebrovascular accidents and cardiac infarctions following too drastic treatment. Salt restriction and the use of diuretics, especially those of the chlorothiazide group, may be indicated. Certain special features concerning their use are dealt with later.

Coronary Artery Disease

The many facets of coronary artery disease are very common in old people, and are related to the degenerated and insufficient coronary artery circulation. On this basis, angina pectoris due to cardiac ischemia is frequently found. Anemia, common in the geriatric age group, may precipitate ischemia and, obviously,

should be corrected according to etiology. When tachycardia is present, from whatever cause, ischemia may also occur in the presence of coronary artery narrowing. The differential diagnosis in those patients who have cardiac ischemia due to coronary artery disease may be difficult. Cardiac-type pain may be due to gallbladder disease or to hiatal hernia with esophagitis, conditions common in such a group. To add to the difficulty, these conditions may coexist with coronary artery disease. For therapy, no drug has been found to surpass nitroglycerin, but from a practical point of view, it should be noted that the usual dose of 1/150 grain may give rise to impairment of the coronary artery circulation, as indicated by electrocardiographic changes, in the older age group. Such a finding is associated with a fall in blood pressure and a rise in pulse rate. It is therefore recommended that smaller doses be used.² The use of long-acting vasodilators may be of value, but in the author's experience, they have proved disappointing. At present, reassurance and the proper use of nitroglycerin are the cornerstones of therapy.

Cardiac infarction in old people may present in an atypical manner. Gross³ believes that by the seventh decade, the vascular architecture of the heart is well prepared to receive the brunt of obliteration even of a main coronary artery, not only on account of the abundant and free anastomoses, but also by the development at this age period of a dense network of arteriae telae adiposae, which can compensate and supply considerable blood to the subjacent muscles. This could explain the presence of old myocardial infarctions in post-mortem material in the absence of an antecedent history. It has often been stated that painless myocardial infarction is a characteristic presentation of this disorder in old age, and a patient may be seen only because he complains of dyspnea, tiredness, palpitation, or other stigmata of heart failure. In addition, shock is said to be less common. This has probably been overemphasized, however, and the clinician who is sufficiently persistent can usually elicit a history of cardiac pain. Un-

fortunately, old people can be poor historians because of confusion and apathy. Nevertheless, small infarcts may go unrecognized, and other than the possibility of a fatal arrhythmia, may have little effect on the patient. Other forms of presentation can occur usually related to peripheral embolization, and consisting of syncope, mental confusion, and hemiplegia. Certainly, the incidence of cerebrovascular accidents is high in old patients with myocardial infarctions and is said to occur in at least ten percent. It should also be remembered that there is an increased incidence of cardiac infarction in these patients following infections, operations, or episodes of unconsciousness from whatever cause.

The treatment of myocardial infarction should not differ from that employed in any other age group. The use of "anticoagulants" was formerly thought to be contraindicated, but there is no evidence that this is so. Although the incidence of cardiac rupture is higher in old people, this cannot be attributed to their use. The greater liability to venous stasis when rest is enforced might indeed indicate the use of anticoagulants. Nevertheless, the overall mortality for an established cardiac infarction is higher in this age group, for obvious reasons.

Rheumatic Heart Disease

Acute rheumatic carditis is extremely uncommon in old people, but the stigmata of previous acute rheumatic infections are not infrequently seen. The commonest lesions are aortic stenosis and mitral valve disease. Pure aortic stenosis, usually of a hemodynamically insignificant degree, occurs especially in old men, where it is frequently of the calcific type. The murmur is usually best heard in the aortic area, but also probably accounts for some of the systolic murmurs heard at the apex and usually attributed to mitral valve insufficiency. Mitral valve disease of rheumatic etiology is less frequently diagnosed, probably because it is neither considered nor sought, although several studies have indicated a comparatively high incidence at postmortem. The valvular

lesion usually consists of mitral stenosis and mitral insufficiency, but tight mitral stenosis may be found on rare occasions. There are certain practical features of these disorders. Firstly, they may account for a remarkably chronic form of congestive heart failure, and secondly, the affected valves may be the site of subacute bacterial endocarditis. Contrary to previous opinion, aortic stenosis is not exempt.

Bacterial Endocarditis

There has recently been a justifiable interest in the incidence of bacterial endocarditis in older people, and it is apparent that this is yet another disease that may easily be overlooked. As is the case in any age group, the basic tenet that persistent fever plus a murmur indicates bacterial endocarditis until shown otherwise, applies in spite of the apparent insignificance of the murmur. A more acute form of endocarditis may occur as a complication of another disease due to the staphylococcus, pneumococcus, meningococcus, or *E. coli*. This should not be overlooked in the older patient, especially the diabetic, suffering from pneumonia, meningitis, or peritonitis. There is not usually a preceding valve lesion. Both the acute and subacute forms of bacterial endocarditis may occur postoperatively, especially when the genitourinary tract has been the site of interference.

The subacute form of bacterial endocarditis due to a streptococcus viridans may constitute a diagnostic problem in the old patient. As in the acute form, a pre-existing valvular lesion may not have been noted, although this is rare. Often enough the presenting features are atypical and may include anemia, general malaise, weight loss, anorexia, abdominal pain, psychosis, or a cerebrovascular accident. Generally evidence of peripheral embolization is unusual, as are splenomegaly and clubbing of the fingers. It behooves the careful physician to allay his suspicions by taking blood cultures to exclude this usually curable disease. There is no special problem concerning therapy, which differs in no way from that used in any other age group.

Thyrotoxicosis

The classical picture of thyrotoxicosis is unlikely to be missed at any age, but it may require much clinical acumen to strip off the disguises that this disease can assume in the older patient. The term "masked" thyrotoxicosis, first used by Levine, may be remarkably apt. It is significant that the older the patient with thyrotoxicosis, the more likely he is to present with symptoms referable to the cardiovascular system. Therefore, manifestations of heart failure such as dyspnea or edema, without an obvious etiology or an associated cardiomegaly, require appropriate investigation to exclude thyrotoxicosis. Concomitantly, a poor appetite, loss of weight, weakness, apathy, and irritability rather than nervousness may also be related to heart failure. Palpitation may be due to atrial fibrillation, a common finding in thyrotoxicosis at any age. When heart failure and atrial fibrillation are treated with digitalis empirically and there is no beneficial response, then thyrotoxicosis is suggested. Angina pectoris has been considered to be a rare symptom in thyrotoxicosis, but in the older patient this is not necessarily so. Surprisingly, this symptom is commoner in women than in men, when thyrotoxicosis coexists with coronary artery disease, and may be of the variety known as angina decubitus. Although thyrotoxicosis may not be the sole cause of a cardiac disability, in many patients with thyrotoxicosis and heart disease, it is nevertheless the predominant factor.⁴ The optimal therapy for thyrotoxic heart failure consists of radioactive iodine, and there is virtually no contraindication at the age level with which we are concerned. However, in severe thyrotoxicosis, the possibility of accentuation of the disease by radioactive iodine therapy may indicate the use of propylthiouracil and iodine as a prior measure.

Arrhythmias

Any form of arrhythmia may occur in the older person and usually has the same significance as in any other age group. There are exceptions, however. A form of sinus arrhythmia without relation to respiration has been

described by Scherf and is indicative of heart disease. Paroxysmal atrial tachycardia may occur, further overloading an already embarrassed heart. This may require the usual therapeutic measures, but it is important to realize that carotid sinus massage is not well tolerated. Paroxysmal atrial tachycardia with block, a serious arrhythmia, is especially important in this age group, for it is frequently associated with potassium deficiency and is an indication of digitalis toxicity.⁵ Mortality is high unless potassium replacement is instituted. A common variety of arrhythmia is auricular fibrillation. This is usually related to heart disease and requires the use of digitalis. However, there is a type of benign auricular fibrillation in older people, characterized by a slow rate and absence of objective findings in the cardiovascular system. This does not necessarily require treatment. An arrhythmia that occurs predominantly in old people is complete heart block with the complication of Stokes-Adams attacks. This should always be suspected when one is investigating the cause of syncopal attacks, and is usually diagnosed with certainty by means of the electrocardiogram. Therapy consists of Isuprel®, adrenalin, and the use of an artificial pacemaker. Recently, beneficial results have been obtained from using molar lactate.

Heart Failure

When congestive failure is present in the old person, in the absence of the diseases previously mentioned, the condition of senile heart may be considered. This term is used in relation to the type of so-called brown degeneration seen pathologically in the heart muscle. It has been pointed out that cardiomegaly may not be so apparent in such hearts, due to the antecedent small size.

Whenever clinical evidence of a hyperkinetic circulatory state is found, such as a wide pulse pressure, tachycardia, and warm extremities, the etiology must be ascertained. Certain diseases that occur in, but are not confined to, the older age group may give rise to such a form of so-called high output failure.

These include anemia, pulmonary heart disease, thyrotoxicosis, beriberi, and Paget's disease. The treatment is appropriate to the etiology.

Certain points in the therapy of congestive heart failure have to be considered in the geriatric age group. There is no contraindication to digitalis in older people, but they are allegedly more sensitive to this drug. This concept may have arisen from its use in conditions where hypokalemia was present due to various causes.

However, it is probably true that digitalization should be more cautiously applied, and that a tailoring of the dosage to individual requirements should be used. Signs of toxicity may be confused with the "normal" apathy, anorexia, or even psychosis encountered in

this age group. Rapid digitalization is rarely needed. The use of diuretics is often indicated, but with the chlorothiazide group of drugs care must be taken, since electrolytic imbalance may occur more easily. Potassium supplements should always be given, preferably in the form of a glass of orange juice daily. Salt restriction may not be well tolerated and hyponatremia can occur. It is generally unwise to reduce salt intake to less than 3.5 grams a day.⁶ Immobilization of the patient by too strict bed rest may be dangerous since this may predispose to venous thrombosis and its consequences. Finally, the very best domiciliary regimen is of little use, if the patient fails to cooperate, through ignorance or forgetfulness. This may mean that supervision by a competent relative should be sought.

Conclusion

Cicero stated that the harvest of old age is the recollection and abundance of blessings previously received. In terms of the structural alterations which have taken place in the cardiovascular system of older people, the cardiologist finds that curses often outweigh blessings! Other than the stigmata of degenerative processes, there are several forms of heart disease that present atypically, often enough, in the old person. Such diseases are eminently treatable, and it is unfortunate that mistakes in diagnosis are usually made because of an insufficient appreciation of existing pos-

sibilities. Furthermore, the picture may be obscured by an accompanying disease not attributable to the cardiovascular system, and this pathological plurality of old people may be a considerable problem. The aged person may also be confused and misleadingly inaccurate in his history. Added to this is the misinterpretation of common signs and symptoms, such as dyspnea and ankle edema, which are more often non-cardiac than cardiac in origin. This group of patients is indeed a challenge to the practitioner in terms of both diagnosis and therapeutic judgment.

References

1. Master, A. M., Lasser, R. P., and Jaffe, H. L.: Studies of blood pressure in apparently healthy old persons 65 to 106 years of age. *Geriatrics*, 13:795, 1958.
2. Harris, R.: Treatment of cardiovascular disorders in the aged. *J. Am. Geriatr. Soc.*, 7:230, 1959.
3. Gross, L.: *The Blood Supply to the Heart*. New York, Paul B. Hoeber, Inc., 1921, p. 149.
4. Sandler, G., and Wilson, G. M.: The nature and prognosis of heart disease in thyrotoxicosis. *Q. J. Med.*, Oxford, 28:347, 1959.
5. Lown, B., and Levine, H. D.: *Atrial Arrhythmias, Digitalis and Potassium*. New York, Landsberger Medical Books, Inc., 1958.
6. Bland, J. M.: Problem of edema and electrolyte disturbances in the aged. *J. Am. Geriatr. Soc.*, 7:227, 1959.

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Office Management of

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The patient with diabetes mellitus, as a rule, is one who can be taken care of quite adequately in the office of a competent physician. Of course, the diabetic who has complications that have brought about a state of acidosis usually is handled best in a hospital.

The average patient seen in an office practice is ordinarily a middle-aged, forty to sixty-year-old individual, generally somewhat overweight, who has had mild symptoms, if any. He has been found to have sugar in the urine often constantly; and frequently an elevated fasting blood sugar. Usually there is a family history of a relative, ordinarily a predecessor, who has had diabetes.

As a physician begins his supervision of such a problem, it is important to check the general physical condition of the patient. Information relative to the integrity of the arterial vascular system, particularly in relation to the fundi, heart, renal apparatus, and lower extremities, is necessary for current management and for future reference as the progress of the disease is observed. Ophthalmologic consultation, chest x-ray, and electrocardiograms are obtained routinely. In addition to the routine urinalysis and blood counts, a blood sugar, non-protein-nitrogen and cholesterol determinations are obtained.

The patient is taught to test the urine,

using any of the standard procedures. If the urine contains acetone, as well as sugar, insulin as well as dietary supervision is begun. If acidosis is not present, only a diet is started. We recognize that almost half of the diabetes encountered can be managed successfully by dietary restriction alone and insulin may never be required. A proper diet, therefore, is the basis of the management of every diabetic.

For a diabetic diet to be satisfactory, it must fulfill certain basic requirements:

(1) The urine must be rendered free of sugar, since this, in the first place, is the reason for the diet.

(2) The patient's weight must adjust to normal average levels. If the patient is overweight, his body weight should progressively be reduced to calculated average-normal levels. If the patient is underweight, below the desired level, the weight should increase to a more optimum level.

(3) The patient should receive from his diet adequate energy to perform his daily tasks. This varies widely depending on whether his or her occupation is one demanding full physical activity and many calories, or conversely a sedentary job with a lower caloric demand.

(4) The appetite must be satisfied. Although this is the least important from the doctor's viewpoint, as a requirement of a

Diabetes Mellitus

This discussion concerns itself with the care of the patient who has been properly evaluated from the viewpoint of correct diagnosis and who presents no immediate complication that has resulted in the occurrence of ketoacidosis.

satisfactory diet, it is one which is most important from the patient's viewpoint. Often this can be neatly accomplished by the feeding of large amounts of low-carbohydrate bulky vegetables, and, if cholesterol intake is no problem, a fair amount of fat, which has a high satiety value.

If the above four requirements are not met by the restricted diet, then it is an inadequate treatment and must be supplemented by the use of insulin.

When we use insulin, it is necessary to remember that unmodified insulin or solutions of zinc-insulin crystals have an action which begins in fifteen to thirty minutes, reaches its peak in one to two hours, and has a duration of action of two to four hours. All of the modified insulins begin to act after a certain latent period following their injection, usually one to two hours, and have a peak reaction for six to twenty hours, and a total duration of action of eighteen to thirty-six hours.

Therefore, unmodified insulin is used for the treatment of the diabetic emergencies, acidosis and coma, since the patient needs help promptly. The modified insulins are used for less urgent situations; namely, the patient who cannot be regulated by diet alone, the diabetic with chronic infections, hyperthyroidism, or any other complication, such as pregnancy

where alterations in the diabetic load are produced.

In an attempt to simplify the type of insulin to be used, I would like to recommend that any diabetic other than those in the emergency group, be placed on NPH insulin. This insulin was developed by Hagedorn and his group of workers in Denmark. Its action begins in one to two hours, and has a duration of eighteen to twenty-four hours. It has the advantage of beginning to act faster than Protamine-Zinc insulin, which begins to react in two to four hours, and has a rather profound reaction twelve to twenty hours after it is given, but not as intense or as prolonged as Protamine-Zinc insulin. Therefore, with Protamine-Zinc insulin, poor control in the morning hours is often seen and a high incidence of early morning pre-breakfast reactions are encountered. In addition, perhaps because of its slow reaction, the hypoglycemia symptomatology following Protamine-Zinc insulin are not the usual symptoms of classical hypoglycemia, but rather are characterized by the occurrence of headache, weakness, and depression. Consequently, these symptoms may be misinterpreted by the unwary.

The reaction of NPH insulin is essentially the same as that of a mixture, two parts of regular insulin with one part of Protamine-

Zinc insulin. Incidentally, this mixture was a popular method of insulin use for more than ten years.

Globin insulin, a combination of insulin, plus the globin fraction of hemoglobin, begins to react in two to three hours after injection and has a somewhat shorter period of duration of action. This is of distinct advantage and value when one is treating an elderly diabetic with coronary or cerebral arteriosclerosis where nocturnal hypoglycemia might be extremely unfortunate. Therefore, this insulin is of greatest value and has its sole use, in my opinion, in this group of elderly diabetics where vascular complications are always hanging over the head of the therapist. When bedtime feedings are used in a patient who is receiving NPH insulin, hypoglycemia is no great hazard.

The Lente insulin group is a type of insulin different in chemical structure from the other insulins described. It is an acetate radical combined with the insulin molecule and an excess of zinc. Its action is of the prolonged variety beginning two to four hours after injection, reaching a peak in eight to twelve hours, and having a duration of twenty-four to thirty-six hours. One of its chief indications is in the diabetic who is having local or systemic allergy to his injected insulin containing protamine. Lente insulin is, by virtue of its chemical structure, less apt to produce these allergic reactions. In some clinics,¹ Lente, ultra-lente, and supra-lente insulins are used in preference to others. One remembers also that if the basis of the allergy is the hog, insulin can be obtained prepared exclusively from beef pancreas, or if the allergy is beef, hog pancreas insulin can be obtained—ordinary insulin mixtures contain both of these sources.

To make our treatment process even more simple, one might categorically decide that—

(1) Unmodified insulin be used for diabetic emergencies.

(2) NPH insulin for all other cases, except where early morning hypoglycemia is bothersome, or allergic reactions occur under these circumstances globin insulin or Lente insulin is to be employed.

If a diabetic requires more than 40 units of NPH insulin daily, it is rare that good control can be obtained unless certain amounts of regular or unmodified insulin are incorporated in the same syringe with the NPH insulin. This is indicated if the urine tested before the noon meal contains sugar. It simply means that the force of the NPH immediate reaction is not sufficiently great to take care of the food eaten at breakfast time. If NPH is given alone in amounts sufficient to clear this pre-lunch glycosuria, often hypoglycemia will occur in the mid-afternoon or early evening hours. It is good policy, under these conditions to recommend a small (fifteen grams) carbohydrate serving at three P.M. and at bedtime. This is usually a glass of milk, which contains twelve grams of carbohydrate, seven grams of protein, and nine grams of fat—total calories about one hundred and sixty. Crackers or cereal may be given in addition, if needed.

Beginning in 1957,² a sulfonylurea compound, called tolbutamide, (Orinase,[®] Upjohn Company), was introduced into this country from Germany, and has become quite popular as an oral agent, serving in some diabetics as a replacement for insulin. Since its principle action is the stimulation of the pancreatic beta islet cells to produce more insulin, it is best suited for use in an individual who can be judged to have an adequate number of potentially responsive pancreatic islet cells. The clinical axiom of using this drug for diabetics who have had the disease only since the age of forty, and who do not use unusually large amounts of insulin, (less than 40 units) for current control, is an acceptable plan. The drug requirements vary from five hundred milligrams to three grams daily. The drug appears in the blood within thirty minutes after ingestion, and a peak concentration is reached in three to five hours. Its half-life is four to five hours. A patient properly regulated with tolbutamide is ordinarily spared the daily use of the hypodermic, and possible hypoglycemia, and can usually be maintained in satisfactory metabolic control indefinitely, as far as our current experience goes. Although some report³ a high incidence

of secondary failures while on tolbutamide, this has not been our experience. An objectionable feature is a definite additional expense since the cost of the tablets exceeds the cost of ordinary insulin requirements. Even more important is the fact that so many patients who could be managed by careful dietary adherence alone, permit themselves the luxury of excessive food intake, which is facilitated by the reliance on tolbutamide.

Consequently, obesity is encouraged. It is quite within the realm of possibility that ten to twenty years hence the proponents of tolbutamide may not be happy when the likely deleterious result of a permitted obese generation of diabetics meet the requiem of pernicious atherosclerosis.

In addition to tolbutamide, another agent available is chlorpropamide (Diabinese,[®] Pfizer Drug Company).⁴ Its physiological action is similar to that of tolbutamide, but it is distinctly different in that the agent becomes bound to the plasma protein and is excreted slowly. Usually 125-250 milligrams daily is sufficient to control the diabetes of a suitable patient. Chlorpropamide is excreted ten times more slowly than tolbutamide. Although eighty to ninety percent of a single dose is excreted in the urine in ninety-six hours, it must be remembered that after a few days employment of this agent, another three weeks time is required before the drug is completely cleared from the blood.

D.B.I.[®] (phenethylbiguanide, U. S. Vitamin Corporation),⁵ will also cause hypoglycemia. It produces anoxia with subsequent increase in glucose uptake by tissue cells, and a decrease in both gluconeogenesis and hepatic glucogenesis. However in our experience, the amounts (ordinarily more than one hundred milligrams) which are needed to control the diabetes of a suitable patient, are so commonly associated with marked nausea and vomiting that its employment is necessarily limited.

It has indeed proved useful in combined use with insulin or tolbutamide in helping with the unstable or brittle type of diabetics.

Let us look for a moment at the problem of diet. Generally speaking, the average doctor has more trouble with this aspect of diabetic management than all others. I suspect that the reason is that in the past, the calculation of calories and the allocation of the three major food groups — protein, fat and carbohydrate, has been too finely drawn. We no longer routinely weigh diets except in the very young patient, or for initial teaching instruction for the adult. It is true also that when one sees a diet reported to the first decimal place, he can be certain that someone is unrealistic in his understanding as to how the diabetic actually lives.

Naturally the average doctor cannot prescribe a diet as completely as a trained dietitian, but if a few fundamentals are remembered, the problem is not too complex.⁶

(1) The average person needs approximately 10-15 calories per pound. This will take care of the ordinary day-in and day-out activity. Naturally a laborer may well need twice this amount, but observation of a patient's weight gives the clue as to whether calories need be adjusted up or down, to keep pace with the actual caloric need.

(2) The protein content of the diet is approximately 0.5 grams per pound. This amount will take care of the metabolic needs for tissue metabolism unless the patient has unusual metabolic demands as a consequence of fever, hyperthyroidism, or rapid growth as seen in the adolescent.

(3) The fat allotment is fifty to one hundred grams, depending, in the main, on whether or not the patient is undernourished or overweight.

(4) The balance of the calculated calories is given in carbohydrate which will total one hundred and fifty to two hundred grams in the average patient.

After the dietary figures are calculated, one simply refers to a standard text book of medicine or dietetics, or to the prepared dietary charts furnished by several of the manufacturers of insulin and other diabetic armamentaria.

A WARNING

Patients quickly learn food values and become rather accurate in estimating calories. They delight in asking the doctor about calories and food values, the calculations of which they already well know. Their purpose is to find out how sharp their doctor is, and to see if he really knows about the care of diabetics. If the patient is able to out-manuever his doctor in this discussion, he then, as it were, climbs into the front seat of the therapeutic machine, slips under the steering mechanism and begins to drive the omnibus. The unfortunate physician now is eased into the back seat and must sit there and suffer the tortures of the back-seat passenger as he watches an inexperienced driver thread his way through a complex therapeutic traffic jam. The moral is, don't be out-manuevered.

Then he has at once for his patient a detailed list of foods with sample menus and the important list of equivalent foods so that free substitution is available. Consequently the diet may be varied and made pleasant and attractive. If the diet is within five percent of the calculations of either the total calories or the protein-fat-carbohydrate content, it will usually suffice.

(5) Then observation of the patient's weight, urinalysis, blood sugar, appetite control and work performance will guide the physician either into the use of insulin, the decrease or increase in the caloric intake, the addition of an oral hypoglycemia agent, or any alterations in the diet that may appear indicated.

Listed here are a few simple dietary facts:

(1) Food values are listed in percent, which of course is based on one hundred grams of food, the amount delivered in two tablespoons of a cooked vegetable.

(2) The leafy vegetables, which grow above the ground, are the three percent group, and usually can be eaten by the diabetic without restriction. They serve the excellent role of not only filling up the stomach and satisfy-

ing the appetite, but also supplying minerals and vitamins.

(3) The vegetables which grow in the ground are the six to fifteen percent group.

(4) The twenty percent vegetables are Irish potatoes, rice, dried beans, and corn.

(5) An egg supplies Ehrlich's magic figures 6-0-6; six grams each of protein, and fat; none of carbohydrate.

(6) A strip of bacon, the number (13), one gram of protein, three grams of fat.

(7) A slice of bread, a serving of cereal, a glass of milk, or one and one-half liberal tablespoon of the starchy vegetables or commercial ice cream, all yield the same amount of carbohydrate—fifteen grams.

(8) Milk contains three percent protein, four percent fat, and five percent carbohydrate, (3-4-5).

(9) An average serving of meat, beef or chicken, contains per ounce, protein seven grams, fat five grams, for the total calories of seventy-five.

What attitude should we take in regard to this ambition of rendering the urine free of sugar?

In 1931, Stolte⁷ advocated an undisciplined method of handling diabetics; namely, that the regulation be characterized by an avoidance of symptomatic diabetes and that no regard be given otherwise to the status of the urinalysis. This suggestion was promoted in this country by Tolstoi.

On the other side of the argument, stand most of the schools of thought that have been concerned for years with the management of large numbers of diabetic patients and perhaps, even more important, concerned with the teaching of thousands of medical students and doctors who have wide future responsibilities in the care of diabetics.

There are some, such as Dolger,⁸ who are of the opinion that good control does not prevent the development of vascular complications. However, the report by Wilson, Root and Marble, in 1951,⁹ showing that among two hundred and forty-seven well-regulated diabetics, none had any of the usual complica-

tions, provides impressive contrary evidence. Duncan makes an apt statement relative to the free-diet scheme of Stolte and Tolstoi ("It fosters the maintenance of any unphysiologic state. It appears inescapable from accumulating clinical data that a penalty will eventually be extracted, a penalty which otherwise might be prevented in some and postponed in others.").

F. N. Allen states in his foreword to Duncan's textbook, "Therefore for many years, I have promised every cooperative patient a full lifetime of health, and I have had a standing challenge to family physicians and the various consultants who see these patients, to report a single occurrence of any of the familiar complications, and nobody as yet has shown an exception."

A recent report from Sweden¹⁰ is of great interest. In a group of diabetics treated with careful dietary control with emphasis on a low-calorie, low-carbohydrate intake, during the years 1922-1935, the incidence of renal and retinal lesions was decidedly less than that in another group, observed during the years 1936-1945, when free diets were permitted.

I feel that the average doctor in practice should make a studious attempt to keep the urine of his diabetic patients free of sugar. If he does this, he can then lie down at night and sleep with a clear conscience in the knowledge that he has done all in his power to return his diabetic patients to the metabolic status that exists in the non-diabetic. Producing more normal physiologic conditions in a given patient returns that individual to the state from which he departed when the complication of diabetes originally arose.

No discussion of the general problem of diabetes is complete without some comment relative to the problem of the care of the feet. Today, diabetics rarely die of acidosis or coma, but are surviving to experience the vascular complications of this disorder. As mentioned above, good regulation of the disease may spare the patient some of the hazards met with

in the brain, eyes, kidneys or heart. The feet remain an area where attention to simple matters is of the greatest importance. A diabetic must be meticulous in the matter of keeping his feet clean. They should be washed twice daily. At night, after washing, lubrication of the skin with a bland oily preparation prevents drying and cracking of the skin, which may be the forerunner of infection. Corns should not be pared. Toenails should not be clipped too closely, to avoid cutting the skin. Circular garters should not be worn by men or women. We have had considerable trouble lately from the tightly fitted elastic-top sock. If the sock or stocking has a hole in the toe or heel, throw it away, or darn it carefully. Rough repairs may result in a point of skin abrasion and infection. A diabetic should be careful not to sit for long periods of time with legs crossed so as to impair the circulation. Trichophytosis should not be treated with salicylic acid containing compounds, which will abrade the skin. Undecylenic Acid (Desenex) is permitted. Cuts in the skin of the feet should never be treated with iodine, which is too caustic; use alcohol mixtures which do not harm the skin. Naturally, the underlying arteriosclerotic process leaves the skin vulnerable to infection, due to the arterial ischemia. Therefore, the above mentioned conservative procedures may delay the occurrence of complicating problems in the legs.

Not only are the arterial problems important, but varicose veins with resulting venous stasis is another problem where prevention of secondary changes in the skin can be more easily prevented than cured.

Formerly, an infected toe usually meant an amputation above the knee. Recently, the improvement of surgical technic and the availability of antibiotics has permitted successful amputation of a single digit or more than one toe with preservation of the foot. But who would willingly get cornered into such a predicament of amputation that might be delayed or even prevented by some of the simple measures discussed above?

Bibliography

1. Williams, Robert: Personal Communication.
2. Loubatieres, A.: Les Substances Sulfamedies dans le traitement du diabete sucre. *Presse Med.*, 83:1728, 1955.
3. Menhart, H.; Camerini-Davalos, R. and Marble, A.: Results of Long-term use of Tolbutamide (Orinase) in Diabetes Mellitus. *J.A.M.A.*, 167:818, 1958.
4. Symposium—Chlorpropamide and Diabetes Mellitus. *Ann. New York Acad. Sci.*, 74:407-1028, 1959.
5. Krell, L. P. and Camerini-Davalos, R.: Clinical Trials with D.B.I. a New Non-sulfonyl urea Oral Hypoglycemic Agent. *A.M.A. Arch. Int. Med.*, 102:22, 1957.
6. Weinstein, Albert: Tailoring Insulin, Insulin Substitute Tablets and Diet. *J. Ark. Med. Soc. Vol. 56, No. 5*, 179-184, Oct. 1959.
7. Stolte, Von K.: Freie Diät Beim Diabetes. *Med. Klin.* 27:831, 1931.
8. Dolger, Henry: Factors Influencing Premature Cardiovascular Degeneration in Diabetes Mellitus. *Progress in Clinical Endocrinology*: Grune and Stratton, page 303, 1950.
9. Wilson, J. L., Root, H. F. and Marble, A.: Diabetic Nephropathy. *New England J. Med.*: 245:513, 1951.
10. Johnsson, Sven: Retinopathy and Nephropathy in Diabetes Mellitus. *Diabetes*, IX: 1-8, Jan., Feb. 1960.

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PSYCHOTHERAPY IN MIGRAINE

A group of 35 patients suffering from migraine in whom standard remedies had failed were studied physically and psychiatrically and treated by psychotherapy. Followed up at 6-12 months, the majority had improved, with reduction of headaches, psychiatric disturbance, drug intake, and incapacity.

It is concluded that in this group of migraine patients psychological or emotional factors played an important part in aggravating the frequency and severity of attacks.

RICHARD A. HUNTER, M.D. and IAN P. ROSS, M.D.

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Local Anesthetic Drug Reactions



The acquisition of the skill necessary to perform local anesthesia is of dubious value, if the physician does not comprehend the dangerous problems, which are inherent in its use. The cause, prevention and treatment of local anesthetic drug reactions are well established. A fatal termination is usually preventable, if the required knowledge, skill, drugs and equipment are immediately available to the patient. An absence of any of these features should constitute a contraindication to the employment of local anesthesia.

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Physicians who administer local anesthetic drugs should have a thorough understanding of the alarming reactions which can be produced by these drugs.

Five types of reactions can occur following the administration of local anesthetic drugs. They are:

1. The overdose reaction.
2. The intolerance reaction.
3. The allergic reaction.
4. The vasopressor reaction.
5. The psychogenic reaction.

1. The Overdose Reaction

The critical situations which develop following the use of local anesthetic drugs are due, in about ninety-nine percent of cases,¹ to the administration of excessive doses of the drugs. This error may be due to ignorance, accident, or carelessness. Many of the therapeutic agents which are employed in medical practice

can be lethal, if inordinate amounts are administered. They have well defined maximal doses, which must not be exceeded, and which will vary with the age, physical condition of the patient and the route of administration. Most physicians are aware of these principles. The same principles apply, with even greater emphasis, when local anesthetic drugs are used. Debilitated and cachectic patients can not tolerate doses of drugs which are safe for a normal adult.

The maximal doses of the commonly used anesthetic agents are shown in Table 1. If these amounts are transcended, a significant number of untoward sections can be anticipated.

Measurements of local anesthetic drugs should be made in milligrams (mgm.) and not

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TABLE 1 MAXIMAL DOSES OF COMMON LOCAL ANESTHETICS FOR HEALTHY ADULTS

| DRUG | SUBCUTANEOUS INFILTRATION | TOPICAL APPLICATION |
|-----------------------------|---------------------------|---------------------|
| Procaine | 1000 mgm. | — |
| Tetracaine (Pontocaine®) | 100 mgm. | 40–50 mgm. |
| Hexylcaine (Cyclaine®) | 1000 mgm. | 300 mgm. |
| Piperocaine (Metycaine®) | 1000 mgm. | — |
| Chloroprocaine (Nesacaine®) | 1000 mgm. | — |
| Lidocaine (Xylocaine®) | 500 mgm. | 200–250 mgm. |
| Cocaine | — | 150 mgm. |

in milliliters (ml.). This allows a reasonable comparison of drugs, which are available in a variety of concentrations. Mathematical adeptness is not a prerequisite for this change in concept. A 1.0% solution contains 10.0 mgms. per ml., and 20.0 mgms. is contained in a 2.0% solution. Movement of the decimal point one space to the right will convert percentage concentrations of solutions into mgms. per ml., and movement of the point one space to the left will change mgms. per ml. into percentage concentrations.

The toxicity of local anesthetic drugs increases by logarithmic, not by arithmetic, progression when the concentration is increased. Thus 120 ml. of a 1.0% solution of procaine (1.2 Gms.) will kill a rat in twenty minutes, but only 40 ml. of a 2.0% solution (0.8 Gms.) will produce the same effect.² It is important that the weakest concentration of drug, which gives the desired analgesic effect, should be employed. A 0.5% solution of procaine or lidocaine (Xylocaine®) is adequate to provide infiltration anesthesia of the abdominal wall. A 2.0% solution is unnecessary and increases the danger to the patient. The maximal dose of the drug, however, must not be exceeded, regardless of the concentration employed.

The toxic effect of these agents is due to the attainment of certain concentrations in the plasma. The routes of administration, which permit the most rapid absorption, will allow this concentration to be reached more rapidly and with less drug. Since intravenous injection

allows the most rapid entry of the drug into the blood, care must be taken during the injection to ensure that the orifice of the needle is not within a blood vessel. Aspiration through the syringe before injecting the drug, and movement of the needle as the drug is injected, are most necessary precautionary measures.

Topical anesthesia of mucus membranes is a commonly used technique. It must be appreciated that these highly vascular surfaces allow the drug to be absorbed almost as rapidly as by direct injection into a vein.³ Only small amounts of drugs can be employed safely during this procedure. It has been suggested in the past that higher concentrations of cocaine are absorbed less rapidly than lower concentrations, since the local vasoconstrictor action of cocaine was greater with the higher concentration. This is not true. A 10.0% solution of cocaine is absorbed as rapidly as a 4.0% solution.³

It is wiser to avoid injecting local anesthetic agents into inflamed areas, because the injection might spread the infection, is painful and the resultant anesthesia is poor. Of greater importance is the danger that the increased vascularity will facilitate absorption, and the toxic effects of the drug are more readily produced.

Adrenaline, in concentrations of 1 in 200,000, will delay absorption of local anesthetic drugs, by producing vasoconstriction at the site of deposition of the drug. Adrenaline

should be added to the local anesthetic solution whenever a large amount of drug is injected.

Hyaluronidase has an opposite effect to adrenaline. It facilitates the spread of the drugs through the tissues, and increases the rate of absorption. The addition of hyaluronidase to local anesthetic drug solutions has been advocated to permit satisfactory nerve block, even if the needle has not been placed close to the nerve.⁴ The price which must be paid for this dubious aid to poor technique is more rapid absorption of the anesthetic drug.⁵

The rate of injection of local anesthetic agents bears a relationship to the rate of absorption. 2000 mgms. of procaine has been administered by slow intravenous injection without causing a reaction, whereas 1000 mgms. injected rapidly into an extravascular site can produce a serious reaction. Local anesthetic drugs should be administered in divided doses, when they are applied to mucus membranes, or when large amounts are injected.

There is considerable difference of opinion with regard to the value of preanesthetic medication with barbiturates in the prevention of the convulsive type of reaction.⁶ It is true that heavy barbiturate sedation will prevent the appearance of the early signs of a toxic reaction. The serious signs, such as convulsions and cardiovascular collapse, can occur despite preanesthetic medication with barbiturates. The loss of these early premonitory signs would appear to be a disadvantage, since no measures can be taken to prevent the onset of the dangerous features of a reaction. Adequate preanesthetic sedation may be necessary for surgery with local anesthesia, but the indication is the relief of apprehension and discomfort, rather than the prevention of a toxic reaction.

The following brief case histories illustrate typical sequences of errors which culminated in local anesthetic drug reactions.

CASE ONE. 10 ml. of tetracaine (Pontocaine) was injected around an anal fissure of a twenty-nine-year-old woman. Ten minutes later the patient lost consciousness, and no pulse, blood pressure or heart sounds could

be determined. Artificial ventilation and cardiac massage were instituted, and the patient recovered completely. The surgeon had inadvertently injected the 2.0% solution of tetracaine, prepared for topical anesthesia, instead of the 0.15% solution, prepared for infiltration anesthesia. A total of 200 mgms. of tetracaine was injected rapidly into a vascular area.

CASE TWO. A bilateral paravertebral block of the first lumbar sympathetic ganglia was performed to facilitate dilatation of the cervix, during the first stage of labor. The patient convulsed and lost consciousness but resuscitation was successful. 30 ml. of a 2.0% solution of lidocaine (600 mgms.) had been injected.

CASE THREE. An eighteen-month-old child was anesthetized with ether, and his larynx was visualized and sprayed with 10% cocaine solution. The infant convulsed five minutes later. Oxygen was administered, and an intravenous injection of thiopental controlled the convulsion. The child recovered. An investigation revealed that the atomizer yielded a very coarse spray and leaked several large drops of cocaine with each manipulation. The infant had been grossly overdosed.

CASE FOUR. A surgeon informed an operating room nurse, during a telephone conversation, that he intended to use procaine solution, during a proposed emergency abdominal operation. The abdominal wall was infiltrated with the local anesthetic solution, and shortly thereafter, the patient convulsed, developed severe cardiovascular collapse and died. It was discovered that the nurse had misunderstood the surgeon and had provided cocaine instead of procaine.

CASE FIVE. A patient, who had been heavily sedated with morphine and secobarbital, had a very thorough topical anesthesia administered to permit bronchoscopy. This technique involved spraying the oral cavity, gargling and instillation into the trachea of a 10% solution of cocaine. The patient lost consciousness, convulsed and developed severe hypotension. Treatment of the reaction was successful and the patient recovered. An investigation revealed that an indeterminate amount of cocaine had

been used. 10 ml. of a 10% cocaine solution had been provided. The explanation, which was advanced, was that this was the routine practice.

Signs and Symptoms

The signs and symptoms of an overdose reaction are due to excitation, followed by depression, of the cerebral cortex and medulla. The peripheral actions of the drug, such as myocardial depression and peripheral vascular dilatation, may account for some of these signs. The sequence, excitation followed by depression, is not always seen, and the first evidence of a reaction may be due to severe depression.

The early signs of cerebral stimulation are marked by a change in the behavior, personality and reaction of the patient. These may manifest as restlessness, nervousness, unreasonableness, loquacity, somnolence, incoherence, nausea and vomiting, a metallic taste, dizziness or blurred vision. It is obvious that these changes would be absent in patients who had been heavily sedated with barbiturates. The appearance of any of these features should alert the physician to the possibility of a developing toxic reaction. Progression of the reaction will lead to muscular twitching, choreiform movements and, eventually, clonic convulsions. Respiration decreases or ceases during a convulsion, and hypoxia will be an additional factor. Loss of consciousness will occur at some stage of the reaction. Lidocaine (Xylocaine) may cause loss of consciousness, without muscular movements or alteration in blood pressure, pulse and respiration. These patients usually regain consciousness in fifteen to twenty minutes. This is a sign of a reaction to lidocaine, and must be treated accordingly, since it cannot be relied upon to confine itself to such a mild course. It is important that verbal contact be maintained with the patient throughout the injection of the local anesthetic drug. If any early signs of a reaction appear, the administration of drug must cease.

Nausea and vomiting, from central stimulation of the vomiting center or from hypoxia,

may occur at any time during the course of a reaction. Those patients whose oral intake has not been restricted may vomit gastric contents, and aspiration of vomitus will complicate the situation.

The initial stimulation of the cardio-respiratory centers will cause an increase in blood pressure, pulse and respiratory rate, or variations in respiratory rhythm. These changes are easily overlooked, and are difficult to evaluate, with a patient who is exposed to the discomfort of a nerve block. Therefore, the first changes, respiratory depression and hypotension, which are usually observed, are due to depression of these centers. Progression of the depression will lead to apnea, and absence of the blood pressure and pulse. If this triad occurs, a diagnosis of cardiac arrest must be presumed, and immediate resuscitative measures must be undertaken.

Treatment

When it is suspected that a toxic reaction has occurred, the injection of the drug must be halted, and oxygen should be administered to the patient.

The drugs of choice in the treatment of the excitatory motor reaction are the barbiturates. They have no place, however, in the treatment of any other symptoms of a toxic reaction, as they enhance the existing cardio-respiratory depression. The ultrashort-acting barbiturates, thiopental (Pentothal®) and thiamylal (Surital®) are the most satisfactory members of this group. A 2.5% solution of either drug is administered, very slowly by intravenous injection until the convulsion ceases. The short acting barbiturates, secobarbital (Seconal®) or pentobarbital (Nembutal®), should be used if the more rapid acting drugs are not available.

Artificial ventilation is necessary if respiratory depression or apnea develops. In the operating room, an anesthetic machine will allow oxygen to be administered by intermittent positive pressure, and removal of endogenous carbon dioxide. If this apparatus is not available, artificial ventilation can be carried out with a

mask and rebreathing bag attached to an oxygen supply, or by the mouth-to-mouth method, using a Safar® airway.⁶ The adequacy of ventilation should be gauged by inspection of the movements of the chest wall. Forward traction on the lower jaw or the insertion of an oral airway will usually overcome obstruction of the natural airway. The introduction of an endotracheal tube is indicated, only if the airway obstruction can not be overcome by the simple methods. In an emergency situation, the primary problem is to force oxygen into the lungs as rapidly as possible. An inexperienced individual will waste valuable time, whilst attempting to introduce an endotracheal tube. The principles and techniques of artificial ventilation are quite simple, and can be mastered by every physician.

Cardiovascular depression should be treated by the intravenous injection of vasopressor drugs. Metaraminol (Aramine®) is very useful for this purpose. It is potent and can be administered intravenously by single injections of 0.5-2.0 mgms., or as an infusion by diluting 20-30 mgms. in 500 ml. of 5% dextrose in water. The intramuscular injection of 3.0-5.0 mgms. of metaraminol will provide a prolonged effect. Any of the other potent vasopressors can be employed. Although adrenaline is a good myocardial stimulant, it is a poor vasopressor, since the initial pressor response is followed by a significant fall in blood pressure, below the initial level.

The absence of pulse, heart sounds, and blood pressure constitutes the syndrome of cardiac arrest. The only safe treatment, which can be recommended at the present time, is artificial ventilation and manual cardiac massage. A transverse incision is made in the fourth or fifth left interspace, extending from the anterior axillary line to the left border of the sternum. This incision is deepened, until the pleural cavity is opened and the heart exposed. If the heart has completely stopped, cardiac massage, with or without the intracardiac injection of adrenaline or calcium chloride, will often cause the heart to resume a spontaneous beat. If ventricular fibrillation

is present, massage should be instituted until the myocardium appears well oxygenated, when reversion to a normal rhythm can be attempted by the use of an electric defibrillator. Hosler and Stephenson give a detailed description of the technique of cardiac resuscitation in their books.^{7, 8}

2. Intolerance Reaction

There are certain individuals who are intolerant to local anesthetic drugs. Sudden cardiovascular collapse, respiratory failure and death rapidly follow the administration of small amounts of the drug. This intolerance reaction is, fortunately, quite rare. Investigation of many of these alleged reactions reveal that the amount of drug used was actually in excess of the recommended maximal doses. The mechanism of the intolerance reaction is probably similar to that provoked by an overdose of the agent, except that severe central depression is produced by an unusually small dose. It has been suggested that occasionally it may be due to anaphylaxis. This connotes an allergic response, and, to substantiate such a diagnosis, some other evidence of an allergic reaction should be present.

The treatment of the intolerance reaction is that which has been described for the overdose reaction.

3. The Allergic Reaction

An allergic response to local anesthetic drugs is demonstrated by some patients. They may develop dermatitis, urticaria, angioneurotic edema or asthmatic breathing. Any patient who has shown such a response should be skin tested, before he is exposed again to these drugs. A small intradermal wheal can be raised on the flexor surface of the forearm, by injecting a small amount of the drug through a 26 gauge needle. A control wheal of normal saline should be made on the other arm, to allow an intelligent interpretation of any skin reaction which appears. The patient who has an allergic sensitivity to a specific local anesthetic agent, may not be sensitive to another drug, with a different chemical structure

TABLE 2 THE CHEMICAL GROUPS OF COMMON LOCAL ANESTHETICS

1. BENZOIC ACID DERIVATIVES:
COCAINE, PIPEROCAINE AND HEXYLCAINE
2. AMINOBENZOIC ACID DERIVATIVES:
PROCAINE, TETRACAINE, AND CHLOROPROCAINE
3. AMIDE: LIDOCAINE

(Table 2). Physicians, nurses and dentists also may be allergic to these drugs. They occasionally develop dermatitis from contact with the local anesthetic solutions, which they use in their practice.

This reaction will usually respond to antihistamines, adrenaline or cortisone preparations.

4. The Vasopressor Reaction

This is also due to the administration of an excessive amount of drug, but in this instance it is a vasopressor, usually adrenaline. When vasopressors have been added to local anesthetic drug solutions, the amount of the vasopressor, which the patient receives, must be carefully appreciated. Palpitations, tachycardia, nausea and vomiting, pallor, tremor, sweating, headaches, severe hypertension and cardiac arrhythmias may appear during this type of reaction. The injection of adrenaline during general anesthesia with cyclopropane, halothane, trichlorethylene or chloroform is particularly dangerous, as serious cardiac arrhythmias may ensue.

When vasopressor drugs are added to solutions of local anesthetic agents, the lower the concentration, the less the likelihood of an overdose. A concentration of 1:200,000 of

adrenaline will provide an optimal effect in delaying absorption of the anesthetic agent, and in prolonging the duration of anesthesia. No advantage is gained from the use of higher concentrations. The amount of vasopressor which is to be added must be carefully calculated, and accurately measured with a small syringe.

These distressing symptoms may require treatment during surgery. Analgesic and sedative drugs will usually provide relief during a mild reaction. An alarming rise in the blood pressure can be controlled by the intravenous injection of a sympatholytic drug, such as phentolamine (Regitine®).

5. The Psychogenic Reaction

There are many patients who react dramatically to the insertion of a needle, even when no drug has been injected. Some will perspire, become pale, develop hypotension and lose consciousness. Other patients will become nervous, apprehensive, hysterical and occasionally will convulse. This reaction is readily confused with the dangerous overdose or intolerance reactions, if any anesthetic drug has been injected. It is safer, however, to treat these signs and symptoms at their onset, as if they were part of a dangerous reaction. No time must be lost, in an attempt to differentiate between the types of reactions, before treatment is instituted. A rapid return to a normal state will distinguish the psychogenic reaction.

These patients are unsuitable candidates for local anesthetic procedures. If local anesthesia is mandatory, heavy preoperative sedation may be of value.

Summary

Five types of untoward reactions can be distinguished following the administration of local anesthetic drugs. They are: the overdose reaction, the intolerance reaction, the allergic reaction, the vasopressor reaction, and the psychogenic reaction.

An understanding of the overdose reaction is important, because it is the most frequent of these reactions, is dangerous, and can be readily avoided. Treatment must be prompt and correct to allow successful resuscitation of the patient.

References

1. Sedove, M. S., Wyent, G. M., Gittelsohn, L. A. and Kretschmer, H. E.: Classification and Management of Reactions to Local Anesthetic Agents, J.A.M.A., 148: 17-22, 1952.
2. Moore, D. C.: Complications of Local Anesthesia, Springfield, Illinois, Charles C. Thomas, 1955.
3. Campbell, D. and Adriani, J.: Absorption of Local Anesthetics, J.A.M.A., 168:873-877, 1956.
4. Moore, D. C.: The Use of Hysluronidase in Local and Nerve Block Analgesia, Other Than Spinal Block: Anesthesiology 12:611-626, 1951.
5. Tetum, A. L., Atkinson, A. J. and Collins, K. H.: Acute Cocaine Poisoning, Its Prophylaxis and Treatment in Laboratory Animals: J. Pharmacol and Experiment. Therap., 26:325-335, 1925.
6. Safer, P. and McMahon, M.: Mouth-to-Airway Emergency Artificial Respiration, J.A.M.A., 166:1459-1460, 1958.
7. Hosler, R. M.: A Manual on Cardiac Resuscitation, Springfield, Illinois, Charles C. Thomas, 1954.
8. Stephenson, H. E.: Cardiac Arrest and Resuscitation, St. Louis, C. V. Mosby, 1958.

1100 West Michigan Street



DIET AND WEIGHT-REDUCTION

On 800-calorie and 1000-calorie diets, very obese patients lose weight steadily over periods of up to four months.

If the periods of study are long enough to achieve a "steady state," the rate of weight loss on a diet consisting mainly of fat does not differ significantly from the rate of weight loss on an isocaloric diet consisting mainly of carbohydrate.

When these diets are interchanged, deviations from the weight curve occur, lasting up to ten days. These can be accounted for mainly by changes in the fluid balance.

T. R. E. PILKINGTON, M.D., V. M. ROSENOER, M.B.,
H. GAINSBOROUGH, M.D., M. CAREY, B.S.C.
The Lancet (1960) No. 7129, Pp. 856-858.



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The Child with Congenital Heart Disease

The growth and development of the child who is born with a congenital heart lesion is determined not only by this defect but by multiple factors which play on all normal children as they progress from infancy through adolescence. His other chromosomes, his parents' attitudes and his environment must be considered too. Primary emphasis has been placed, and rightly so, on the complete diagnosis and treatment of all remedial cardiac lesions at the optimum age. But the child as a whole must not be ignored. Often he must wait through early childhood before surgery is attempted. Then some cases will be corrected completely while others can only be palliated or not safely attempted at all. Wise parents seek help, not only from the surgeon, but from their family physician and pediatrician in matters of diet, discipline, infection, exercise, and handling of associated defects. Each of them requires careful individual consideration.

In the course of the last ten years, a large outpatient Congenital Heart Service, as well as a hospital service, has been in operation at the Medical College of Virginia. During this period, six hundred and seventy new outpatients have been seen or a total of nine hundred and twenty-five patients who are on record including both outpatients and hospital cases. A large number of congenital heart patients have been operated on surgically, while nine hundred and thirty-nine catheterizations have been done for more definitive diagnosis. Specific details of lesions, studies, and therapy are being presented elsewhere. The purpose of this paper is to emphasize the problems in dealing with the patients themselves and their parents in relation to this type of physical defect.

Signs of Congenital Heart Disease

When does the problem begin? The most common onset is the discovery of the murmur. The murmurs of aortic and pulmonary stenosis

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may be audible from birth, but nine-tenths of murmurs heard in the nursery will disappear shortly thereafter. They are either functional in origin or due to the open foramen ovale or patent ductus in infancy which will close as the pressures in the pulmonary circuit fall normally in the first few weeks of life. A soft murmur from a ventricular septal defect may appear in the following few months, but it is rare for an atrial shunt to be heard loudly enough to deserve investigation for three or four years. A patent ductus arteriosus may present as a systolic murmur soon after birth, but the diastolic component requires a gradient between the aorta and the pulmonary artery and becomes audible in the uncomplicated case between the sixth to twelfth month of life.

Cyanosis in the newborn is more commonly on the basis of pulmonary insufficiency or cerebral damage. Deep cyanosis that does not improve in oxygen and worsens on crying is suspicious of a right-to-left shunt or admixture of a serious type. Roentgenograms and electrocardiograms are then indicated. Transposition of the great vessels is the most common cause.

Cyanosis from a tetralogy of Fallot usually appears between the third to six month of life. Pulmonic stenosis of a severe degree may lead to an atrial shunt and cause an insidious cyanosis and later failure as well. This is in contrast to the tetralogy of Fallot patient who more frequently has apneic and blue episodes but not cardiac failure.

Failure to grow may be the presenting symptom. Often this is more evident if there is borderline congestive heart failure. The slow growth of a child with a large shunt, as in patent ductus arteriosus, ventricular septal defect, or atrial septal defect, is well known, and the improvement after surgical correction is startling.

Dyspnea may be pulmonary or cardiac, but if combined with tachycardia and especially hepatomegaly, cardiac failure is likely. Aortic atresia is the most common cause in the first week of life. Edema is not common; but when present, coarctation should be considered and

excluded by arm and leg blood pressure determinations. The physician may find changes in the blood pressure or edema or gallop rhythm and pulmonary congestion, and these may lead to further investigation of the heart.

Repeated bronchitis and pneumonia may mask mild failure and such infections may be the chief complaint of the parent. Severe wheezing in an infant may appear as an infection, and the heart sounds and size may be normal; but if repeated, a barium swallow should be done to exclude an aortic ring.

Other congenital defects, notably congenital cataracts or deafness, may lead the patient to the physician where heart disease is discovered. A patent ductus arteriosus is particularly likely if the mother had rubella during pregnancy.

Any of the above should make one alert to the possibility of an underlying cardiac cause and immediately obtain a careful cardiac history and physical examination of the child as a whole with special attention to his heart and blood pressures. Roentgenograms and electrocardiograms may be misleading in the first few days of life and must be interpreted carefully, but soon, thereafter, can be of great help in an accurate diagnosis.

An asymptomatic, acyanotic infant with only a systolic murmur on which to base the diagnosis of congenital heart disease deserves serial roentgenograms and electrocardiograms, and careful repeated clinical evaluation. Usually, a tentative diagnosis can be made and the optimum age for more detailed testing and surgery estimated. For infants in serious cardiac difficulty appropriate physiologic studies with the cardiac catheter and/or angiocardiograms can and should be done promptly, unless the diagnosis is clear from the preceeding study (See Table I).

When will surgery be advised in infancy? If early and complete corrective measures are advisable, the psychological problems for the parent and child are minimal. Major surgery must have real benefit under one to two years of age to justify an added risk (See Table II).

In most children, cardiac surgery can be

TABLE I INDICATIONS FOR COMPLETE CARDIAC STUDY IN INFANCY

1. Significant cardiac enlargement
2. Cardiac failure
3. Cyanosis
4. Apneic spells
5. Growth failure (not on nutritional basis or other congenital defect basis)
6. Marked right or left ventricular strain on EKG or a changing EKG pattern
7. Severe repeated respiratory infections with evidence of heart disease or wheezing in infancy

TABLE II CONDITIONS WHERE CARDIAC SURGERY IS ADVISED IN INFANTS LESS THAN TWO YEARS OF AGE

- *Corrective Procedures with Fairly Good Outlook*
 - A. Patent ductus arteriosus, malignant type or with congestive failure
 - B. Coarctation of the aorta with congestive failure
 - C. Aortic rings
 - D. Severe pulmonic stenosis
- *Corrective Surgery with High Risk*
 - A. Ventricular septal defects with failure
 - B. Atrioventricular canals
 - C. Anomalous pulmonary venous return
 - D. Aortic stenosis, severe
 - E. Aorticopulmonary window
 - F. Combined IA and IV defects
- *Palliative Therapy*
 - A. Severe anoxic spells from:
 1. Tetralogy of Fallot
 2. Tricuspid atresia
 3. Pulmonic stenosis in combination with other defects as transposition, single ventricle, transposition, etc.
 4. Transposition of the aorta with inadequate admixture

accomplished with less risk in larger children. Optimum ages for major lesions, providing the child has not been in failure or in severe anoxic distress, are generally considered to be as in Table III. This is determined by the natural history of the disease and the difficulty of accomplishing the technical repair at different sizes.

General Problems in Which Parents Need Guidance

I. DISCIPLINE. Discipline begins in infancy and is altered by parental attitudes before birth. A first child, older parents, and especially the death of another sibling make parents apprehensive. To be confronted with a serious congenital lesion with dyspnea or cyanosis is very hard. Anoxic spells are frightening but are far better treated with the knee chest position, extra fluids in hot weather, and sedatives until early surgery can be done, than by a rocking chair day and night. Infants learn quickly that crying gets excessive handling, and they are as unhappy as their parents. Brief periods of crying do not harm these children, and over the weeks ahead, those who have been loved, but not spoiled, will cry far less than their overindulged counterparts. Most parents welcome an opportunity to discuss such problems, as some feel guilty if they do not answer every whimper or meet every demand. That these children can be treated from a disciplinary standpoint like their normal brothers and sisters, is reassuring to all. The very rare and extremely cyanotic infant who cannot be so treated because of blue spells has such severe pulmonic stenosis that he should be considered for surgery at once.

A disciplined child who has been accustomed to other members of the family or friends aiding in his care is better prepared for a hospital experience than one always dependent on his exhausted mother. If parents treat one child differently from his brothers and sisters, the latter become jealous and family problems multiply. To inquire in these relationships is most revealing, and so many problems can be avoided.

TABLE III OPTIMUM AGES FOR SURGICAL CORRECTION OF CONGENITAL DEFECTS

| | |
|------------------------------------------------------------------------------------------------------|-----------------|
| 1. Coarctation of the aorta | 8-12 yrs. |
| 2. Pulmonic stenosis with intact ventricular septal defect (dependent on right ventricular pressure) | 3 years or over |
| 3. Aortic rings | Immediately |
| 4. Patent ductus arteriosus (uncomplicated) | 2 yrs. or over |
| 5. Interventricular septal defects | 3 yrs or over |
| 6. Interatrial septal defects | 5 yrs. or over |
| 7. Atrioventricular canals | 2 yrs. or over |
| 8. Total anomalous pulmonary venous return | Immediately |
| 9. Tetralogy of Fallot—direct approach | 5 yrs. or over |
| 10. Transposition of great vessels | Immediately |
| 11. Aortic stenosis (severe) | 5-14 yrs. |

II. DIET. Mothers of young infants focus great attention on their feeding. Interference with growth does not necessarily occur; but in the face of large shunts or cardiac failure, it is common. Easily digested formulae with supplementary vitamins may have to be given every three instead of four hours if infants tire quickly. Solids are added at the usual time, but no forcing of foods is wise. By six months of age, strained fruits, vegetable, meat, and cereal have been introduced in three meals with one additional bottle if desired. The normally low iron stores of the first six months may need replacement, and iron supplements are indicated. Cyanotic babies do better with hematocrit around fifty to sixty percent, but iron should not be given after this level is reached.

Feeding problems in the second year are well known to pediatricians. If the bottle is not removed by twelve to fourteen months and replaced by a pint of milk a day by cup, the child has less interest in the solid foods more essential to his growth in this period. Encouraging self feedings, small quantities, no between meal feedings and no attention given with meals is as applicable here as to any normal child; but the mother needs confidence, or she will try forcing and special attention which will produce the opposite of the desired result. At least half of our clinic patients in this age

group have a low hemoglobin level. Reducing the milk until a more general diet is accepted is helpful as well as additional iron.

III. ACTIVITY. Activity is voluntarily restricted by children who become dyspneic on exertion. The child with tetralogy may squat, the large septal defects stop and rest, and other severe lesions will not attempt much activity. Severe mixed types in the cyanotic group have died by two years of age. The average patent ductus, atrial defect, coarctation or mild ventricular defect or pulmonary stenosis will not recognize any limitation and none need be imposed except to provide the rest requirements of a growing child. The notable exception is aortic stenosis where sudden death, especially in adolescence may be associated with vigorous exercise. Their left ventricular reserve is not great, and strenuous exertions must be discouraged. Surgical successes in this area with lower risks will help solve this problem, for being deprived of a bicycle and football are not easy to accept.

IV. SCHOOLING. Schooling is imperative for congenital heart patients who need maximum education for vocational needs and for their own satisfaction. Only in the rarest cases do we advise a home teacher and then only for a brief period when local facilities are poor or frequent infections make this advisable. Learn-

ing to adjust with teachers and classmates outweighs the disadvantage of a long bus ride or an occasional infection.

Physician's Responsibility

The physician to whom the family alternately turns for advice and counsel has a responsibility to treat the heart disease as definitively as possible but also to guide the parent in matters of discipline, diet, activity, and education. In addition, he will likely have infections to treat. Large left-to-right shunts especially will find bronchitis and pneumonia as a problem, and these will require prompt and vigorous therapy. Occasionally, prophylactic penicillin orally 200,000 units twice daily is given for a period to protect the child, until he is older and a better risk for surgery.

Immunizations are strongly indicated for routine protection against pertussis, diphtheria, tetanus, and poliomyelitis. Unless the child had a marked febrile reaction, no alteration is made in the usual schedule. In the latter case, they are divided into smaller doses. Smallpox vaccination is deferred only on cyanotic or ill children but must be given before they are ready for school.

When other surgically remedial defects coexist such as cataracts, defects of lip or palate, hernias, orthopedic defects, etc., then surgery is encouraged at the proper age. Except for severely cyanotic infants or ones in congestive failure, anesthesia properly induced and given with extra oxygen is well tolerated. To fail to refer these infants for other such surgery because they have cardiac defects is a serious error of omission. If, in the older child, a tonsillectomy or adenoidectomy is indicated, the same conditions prevail. To prevent bacterial endocarditis, large doses of antibiotics are given before and after any such procedure in the mouth or nose and especially in the removal of infected teeth.

The physician also has a responsibility in the interpretation of the need for and the meaning of special cardiac tests. If cardiac catheterizations and angiocardiograms are indicated, the small risk must be explained to the

parent in relation to the advantages to be gained from the increased knowledge of the child's conditions and his need for surgery. The brief hospital experience for study is in many cases a good preparation for the later one when surgery will be needed.

Cardiologists are increasingly aware of genetic problems related to congenital lesions. Counselling parents of one child with heart disease that a second child should have about a 98.5% chance of being normal is reassuring. In the general population, about one in one hundred thirty-five live births have congenital heart disease. Mongolism, Turner's Syndrome, amyotonia, Frederick's ataxia, and Marfan's disease are often associated with heart disease too. In each of these, the primary condition must receive the major attention. One-quarter of all mongoloid children have congenital heart disease. When severe mental deficiency coexists, cardiac surgery rarely seems warranted. Desperate parents need to realize that correction of the heart disease will have no influence on the underlying brain defect predetermined in the chromosomes.

Turner's Syndrome with the webbed neck, and ovarian agenesis occurs chiefly in the chromosomal males who appear as females. The coarctation of the aorta frequently associated should be repaired and substitute estrogenic therapy given in adolescence.

Summary

Surgical therapy for congenital heart disease has made enormous strides since Dr. Gross first repaired a patent ductus in 1937. But in addition to searching for better diagnosis and surgical treatment for these children, the physician must keep in mind the general measures for discipline, diet, exercise, and education which will make their course smoother in infancy and happier in later life. To treat infections, other remedial defects, and give immunizations as well as reassurance to the parents and child, is the physician's responsibility.

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PEDIATRIC BRONCHOLOGY

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There are definite indications for bronchoscopy in children. These procedures, while entailing some risks, can be life-saving and by timely intervention, neonatal mortality can be reduced, when respiratory obstruction occurs.

In pediatric practice, one frequently encounters pulmonary problems, many of which are best resolved by means of endoscopic procedures. On the other hand, one hesitates to submit children to bronchoscopy, partly due to the fear that the procedure is unduly traumatic and partly because the beneficial results of bronchoscopy are not too well understood. It is, therefore, our purpose in writing this paper to point out some of the indications for bronchoscopy.

The well-trained endoscopist is aware of all the risks involved and takes the necessary steps to improve the respiratory condition of a child, if the need arises. He uses the necessary instruments corresponding to the caliber of the larynx and trachea of the child without causing undue trauma. On the other hand, and assuming that the above conditions are met, the choice between taking a calculated risk or allowing

bronchial or laryngeal obstructions to take their course should be made early in the progress of the disease rather than wait and experiment with a multitude of drugs.

In reviewing the cases during the last few years in which the pediatric service of our hospital has requested bronchologic consultation, certain problems demonstrate the great usefulness of the bronchoscope, both in the diagnosis and the treatment of pulmonary diseases in children. It is the intention of this paper not to cover all of the indications of bronchoscopy but to demonstrate by examples some of the more common problems in which the pediatrician or the general practitioner might understand the value of early bronchoscopy.

We have selected a few cases to illustrate various categories of indication for endoscopy.

Silent Foreign Bodies

Jackson made a statement many years ago that all wheezes are not asthma. The following two cases illustrate that fact:

1. L.S., an eighteen-month old girl, was admitted to our hospital with a history of

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croupy cough of two days' duration which was considered by the family physician to be of infectious origin. She was treated with antibiotics but, because of no improvement, was hospitalized after two days at home. On admission, her respirations were grunting in character and there was marked substernal retraction with audible wheeze. She had an acutely inflamed throat and her breath sounds seemed harsh but suppressed over both bases. X-rays of the chest revealed increased bronchial markings, and had some suggestion of early pneumonitis. The attending physician continued to treat her medically. She became afebrile shortly after admission and remained so for about ten days. During this time, the child was treated with antibiotics and also oxygen with mucolytic aerosol. On various occasions, it was thought that the condition was improving and therefore antibiotics were depended upon to clear it up completely. However, at about the tenth day after admission, it was noted that the child's substernal retractions recurred almost as marked as on the day of admission. At this time, a bronchologic consultation was requested. It was then noted that, in addition to severe substernal retraction, there was an audible slap and palpable thud at the child's larynx. The child was re x-rayed. An opaque foreign body was then seen at the subglottic area. Bronchoscopy was carried out immediately, using a 4 x 30 bronchoscope and, with a forward grasping forceps, a piece of chicken bone was seen and removed. Postoperative recovery was prompt.

2. J.M., a two-year-old white male child of a physician, was admitted suspected of having aspirated a peanut. Following ingestion of a few peanuts, the child gagged and coughed and it was noted that, for a few hours, there was a persistent dyspnea with audible wheeze. These symptoms subsided eventually and the child went to sleep. Had it not been for the father's examination by stethoscope, with the detection of the presence of rales over the entire chest, the problem could have easily been dismissed. However, the child was brought to the hospital and further studies were carried out. First, an

x-ray of the chest was done and this gave the impression of normal lung fields, without any evidence of foreign body or shift of the mediastinum to either side. There was good aeration in both lungs and no signs of consolidation. On physical examination, however, it was noted that on the left side, the chest completely lacked expansion and the breath sounds were markedly diminished, while on the right side, breath sounds were very pronounced. There was also a definite hyperresonance on the left. It was decided, in spite of the negative x-ray and on the basis of the suspicion of foreign body and in the presence of physical findings, to carry out a bronchoscopy.

A sedative was administered to the child. Without anesthesia, the larynx was exposed with a laryngoscope, through which a 4 x 30 bronchoscope was introduced into the trachea. A peanut was found in the left mainstem bronchus, obstructing the entire left lung. After removal, the patient was returned to his room and was completely asymptomatic, without evidence of trauma or residual infection. The child was discharged twenty-four hours later in good condition.

Discussion

In appraising silent foreign bodies in the respiratory tract, we wish to point out several important points.

X-ray in the very early stages may not be fully reliable and can be misleading, especially in the case of foreign bodies of vegetal origin. Emphasis should be placed on a thorough history and careful, complete physical examination. Such signs as the unilateral movements of the chest and the presence of either a palpable thud or audible slap are pathognomonic of a free-moving foreign body. The palpable thud can be elicited with the patient in supine position and head fully extended, with the examiner's hand over the tracheal area of the neck. The audible slap can be heard either by the naked ear or by stethoscope over the same area.

In the second case, had it not been for

the father's close observation, this problem would not have been brought to bronchoscopy perhaps until after pneumonia had set in. Granulations engulfing such foreign bodies and atelectasis can become the seat of serious complications.¹

Atelectasis Due to Inflammatory Conditions

1. M.F., a ten-month-old Negro child, was admitted with cough, fever and dyspnea of four days' duration. He was treated for twelve days by antibiotics and oxygen tent without improvement. X-rays, on admission, revealed an atelectasis of the left lower lobe which persisted without change for twelve days. His white cell count was 17,700 and his temperature was spiking intermittently at about 102°. Tuberculosis was ruled out by history and tuberculin testing. Antibiotic therapy included penicillin, streptomycin, and Chloromycetin.[®] Since there was no apparent improvement, bronchoscopy was requested and was carried out on the twelfth day after admission. It was noted that massive granulations were present, occluding the left mainstem bronchus. On removal of granulations, purulent secretions were aspirated from below this area and it was felt that an adequate lumen was achieved. The possibility of a foreign body below the granulations was also investigated and thus ruled out. The child was then put back on medical management. Another x-ray was taken four days later and the chest was found completely clear, with no evidence of atelectasis.

The child was discharged from the hospital fully recovered, approximately a week after bronchoscopy.

2. S.C., a six-year-old white female child, was admitted with a history of lobar pneumonia involving the left lower lobe, treated at home for several days. Bronchial breath sounds were heard over the left lower lobe while the white cell count at the end of the week was at 10,300, in spite of medication. X-rays showed a density in the left lower lobe in a wedge formation, suggesting a persisting atelectasis. Because of the symptoms, in spite of intensive antibiotic and aerosol therapy, a

bronchoscopy was carried out, at which mucopurulent secretions were removed from the left lower bronchus.

At the end of the procedure, a catheter was introduced into the left lower bronchus and the child was taken to the X-Ray Department where aqueous Dionosyl[®] was introduced and the bronchial tree on the left side was well filled, demonstrating that bronchoscopic aspiration was successful. The condition was markedly improved with perfectly clear breath sounds and the child was discharged in good condition two days later.

3. R.R., a six-month-old white female, was admitted because of pneumonia following measles, with temperature of 105° which resisted resolution with two weeks of intensive antibiotic therapy, blood transfusions and oxygen. The white cell count, between admission and two weeks later, ranged between 16,900 and 20,800. Hemoglobin, on admission, was 8 grams but, with the aid of transfusions, it rose to 12 grams at the end of two weeks. X-rays indicated the presence of increasing density in the right lung field, first noted in the right upper lobe, later in the right lower and finally, widespread areas of atelectasis throughout the right lung. Bronchoscopy was then requested and carried out two weeks after admission.

Without anesthesia, a 3½ x 30 bronchoscope was introduced and it was noted that the right mainstem bronchus was severely narrowed antero-posteriorly. Granulation tissue was present in the lumen and this was removed, thus creating an opening in the lumen no more than about two millimeters in diameter. Below this opening, some secretions were found and removed. Medical management was resumed and resolution of the densities in the right lung were noted by the fifth day, at which time a repeat bronchoscopy was performed and it was noted that the narrowing of the bronchus observed previously had disappeared. At this time, the child appeared clinically improved and was discharged. She was re x-rayed about a month later, at which time the lung was found completely cleared.

Discussion

In cases demonstrating atelectasis following inflammatory conditions, one would be prone to treat them medically without bronchoscopic intervention. In the cases just mentioned, bronchoscopy was carried out after twelve to fourteen days of medical management. We were impressed by the early resolution of the inflammatory condition following removal of obstruction and allowing reexpansion to occur. The danger of depending entirely on medical treatment of inflammatory conditions is that the purulent secretions may produce granulations which, in turn, may cause permanent stenosis of the bronchi. This danger should alert us to the indication for early use of bronchoscopy before irreparable damage has been done.

A Case of Cystic Fibrosis

1. S.B., a four-year-old white female with a confirmed diagnosis of cystic fibrosis, for which she had been repeatedly admitted to the hospital at intervals of four to six months over the last two years, since the diagnosis was established. Prior to the diagnosis, the child had been treated with continuous antibiotics

for what was thought to be chronic bronchitis. Study of pancreatic enzymes, sweat and stools were all very strongly indicative of cystic fibrosis.

Discussion

From the bronchoscopist's point of view, this case was significant for several reasons:

a. Bronchoscopic aspiration produced secretions which were extremely tenacious, almost rubber-like. Ordinary aspiration, as used on other secretions, was ineffective. It was our experience that by giving this child two days of oxygen and vaporized aerosol, it was possible to loosen the secretions, making aspiration easier.

b. It was found that two or three times a year, in the presence of upper respiratory infections, she would require aspiration. Bronchoscopies brought this child out of her severe distress within a short time, the infections subsided and again she became ambulatory and a very happy and very alert child. The patient finally succumbed to a respiratory infection. Pathologic examination revealed multiple lung abscesses.

c. In such a patient, we realize that bronchoscopy is only a palliative measure but, at the same time, may permit a more comfortable and prolonged life.

d. Bronchoscopic aspiration is an instrument which cannot be replaced by aerosols or antibiotics. It must be used when secretions become profuse and are interfering with ventilation. Even bronchoscopy will not remove all of the secretions; but by removing the more superficial secretions, which are also the more viscid, the patient is enabled to expectorate the rest.

Extrinsic Obstruction

1. A.P., a six-weeks-old white Mongoloid infant, was admitted with a history of having aspirated some of her feeding and becoming cyanotic and very dyspneic. On admission, the child was placed in a croupette with oxygen and was treated with penicillin and streptomycin until the fourth day. X-rays indicated

FIGURE 1 Specimen of bronchial secretions from a case of cystic fibrosis, demonstrating its adhesiveness.



atelectasis of the right middle lobe and of the entire left lung. Bronchoscopy was requested and carried out on the fourth day. It was noted that the right mainstem bronchus was quite patent and some secretions could be aspirated, while on the left, the mainstem bronchus was completely collapsed by extra-bronchial pressure which was assumed to be either cardiac enlargement or an extraneous mass. Ten days after admission, pneumonia led to death and, on autopsy, our suspicion was verified by the following pathologic report:

- a. Congenital cardiac abnormality with enlargement
- b. Massive atelectasis of the left lung
- c. Cystic middle lobe of the right lung
- d. Cause of death: Congenital cardiac disease associated with bilateral pulmonary atelectasis

Even though bronchoscopy was ineffectual in the treatment of this case, it was possible to rule out intrinsic obstruction and to focus attention on an extrinsic factor.

Neonatal Aspirations

1. Baby H., a Negro, full-term male newborn, was delivered by forceps and did not cry or breathe spontaneously. Resuscitation was immediately carried out by the obstetrician and anesthetist, including pharyngeal suction and stimulant. After five or ten minutes of these measures, faint breathing and a faint cry was initiated. The child was cyanotic and his chest, on auscultation, revealed rales and suggestion of atelectasis at the bases.

Laryngoscopy was immediately requested and carried out with an infant laryngoscope and the introduction of a soft rubber catheter deep in the tracheo-bronchial tree. This suction was productive of about 5 cc. of thick mucus and meconium, improving the child's cry and clearing the bases of coarse rales. Air entered both bases which were previously thought to be atelectatic. This child's condition improved immediately and he was placed in an incubator with oxygen. There were, at first, signs of intermittent anoxia, such as convulsive episodes and cyanosis, which cleared up by the end of the

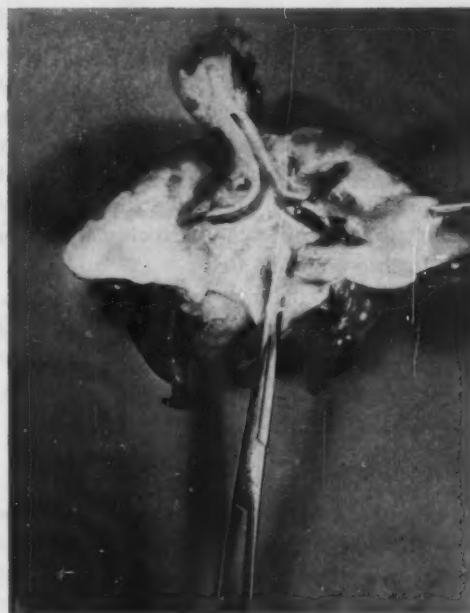


FIGURE 2 Baby V., twenty-four hours after birth. Meconium in the distal bronchi and in the parenchyma. This was inspissated and impossible to aspirate.

first week and the child was discharged in good respiratory condition.

2. Baby V. was a Negro, seven pound, three and one-half ounce, full-term baby born on 9/28/59. After a spontaneous delivery, it was noted that respirations were labored, with cyanosis, and bringing up small amounts of mucus. Examination revealed harsh breath sounds with rales throughout both lung fields. There was no chest retraction and the child was placed in an incubator overnight. Breathing became more difficult in twenty-four hours and a chest x-ray revealed the presence of pneumonitis bilaterally. Antibiotics were initiated and oxygen continued while respirations continued to become labored with severe sub-sternal retractions. The child gradually became very cyanotic and it was apparent that he was in a critical stage. As an heroic measure, bronchoscopic consultation was requested. Laryngoscopy was carried out with a great deal of difficulty because the child would stop

breathing by the time the laryngoscope could be introduced and the larynx exposed. However, with repeated attempts, it was possible to aspirate some meconium from his trachea, but the procedure was not fully satisfactory because of the infant's critical condition. It was apparent in this procedure that we were unable to carry out a thorough cleaning-out of the tracheo-bronchial tree.

Respirations did not improve very much, there was still retraction present, and the child was returned to an incubator and placed in Trendelenburg position and, within a few hours, expired.

Discussion

One of these children was seen early, within one hour, and it was possible to carry out a thorough aspiration of the tracheo-bronchial tree, removing secretions which were tenacious and would have been quite impossible for the child to expectorate. The second child was seen twenty-four hours after birth and in a critical condition. Secretions were not easy to aspirate because of dehydration and their presence in the parenchyma. Autopsy on this child revealed the following findings, which are very typical of neonatal aspiration deaths:

- a. Inhalation meconium pneumonitis
- b. Terminal hypoxia

On microscopic examination, most of the alveolar and bronchial lumina appeared obstructed with meconium material. The pulmonary parenchyma was intensely congested and showed a diffuse clear cell reaction. Grossly, the bronchial obstruction in both lungs was caused by inspissated, inhaled meconium with secondary multiple areas of atelectasis, emphysema and congestion.

Neonatal deaths will undoubtedly be greatly reduced by the early use of the infant laryngoscope and mechanical aspiration of meconium.²

Laryngeal Edema and Tracheotomy

1. A three-year-old, white female child was admitted with a history of respiratory infection of a few hours' duration. Substernal retraction

was very severe, the child was cyanotic and exhausted, whereupon the patient was immediately taken to the operating room and preparation was made for tracheotomy. Laryngoscopy revealed the presence of an acute epiglottitis and a bronchoscope was immediately introduced and the airway restored before tracheotomy was carried out. Recovery and decannulation were completed within two weeks.

2. A two-year-old white male was admitted following extensive burns due to an explosion of gasoline. Severe stridor and substernal retractions suggested the presence of laryngeal edema as well as possible extension to the rest of the tracheo-bronchial tree. As an emergency measure, the anesthetist attempted to pass an endotracheal tube but met with unusual resistance so that it was obvious that tracheotomy would be indicated. The bronchologist was immediately called and a bronchoscope was introduced. Again, a great deal of resistance was encountered by the severely burned and swollen laryngeal tissues. Examination of the trachea and bronchi revealed extensive damage to the mucosa, with edema and bleeding. Tracheotomy was carried out with the bronchoscope in place; however, the child succumbed hours later, notwithstanding some improvement in respiration.

Discussion

In our hospital, a set of sterile laryngoscopes and bronchoscopes is kept in readiness at all times in anticipation of cases in which emergency tracheotomy in children is indicated. We feel that, when possible, a clear bronchoscopic airway should be established before tracheotomy.

A bronchoscope can be inserted in a matter of a few seconds and oxygen made available to the patient, thus making him a much better operative risk. After this, an orderly tracheotomy can be carried out, thus removing from the procedure a great deal of hurry and excitement and thereby avoiding further complications.

Conclusion

In considering the role of bronchoscopy in pediatrics, one might simplify the concept by calling it aspiration and aeration of the lower respiratory tract. Whether it be a foreign body, opaque or non-opaque; or secretions, serous or purulent, due to physical irritation or inflammation; or resultant granulations, the ultimate

aim to restore the normal functions of the airway by removal of obstructions.

Note: To Dr. Joseph P. Atkins, Professor of Bronchoesophagology, University of Pennsylvania, the authors wish to express their gratitude for his cooperation and assistance in the preparation of this paper.

Bibliography

1. Jackson, C. and Jackson, C. L.: Bronchoesophagology, W. B. Saunders Co., 1951, p. 184.
2. Barnett, R. P.: Aspiration of Amniotic Fluid of the

Perinate, J.A.M.A. 169:135-136, March 1959.

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MOUTH-TO-MASK RESUSCITATION

The mouth-to-mask technique is a safe, simple, and efficient method of administering artificial respiration both in resuscitating apneic subjects and in providing assistance to persons in respiratory distress. It is recommended for widespread use. This type of breathing is as efficient as the mouth-to-mouth technique and superior to it, in that it reduces operator apprehension, hypocapnia, and fatigue. Further, if the unit is equipped with a pressure relief valve, serious over-inflation of the victim's lungs is avoided.

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THOMAS K. OLIVER, JR., M.D.

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For many years, the management of problems of emotionally disturbed patients has perplexed the family physician. Paramount among these are the difficulties centering about the psychiatric referral.

The General Practitioner and

The basis of a successful referral is effective communication between family physician and patient, and between family physician and psychiatrist. Good communication always enhances and promotes good medicine, which is the goal of all physicians.

There is no doubt that it may take great patience, time, and skill to effect a psychiatric referral. Patients will accept consultation with a radiologist, internist, or surgeon with relative ease, once the need for more specialized evaluation is pointed out to them. They will more readily submit their bodies to advanced and detailed medical scrutiny than their thoughts and feelings, and are more willing to accept organic illness than one of an emotional or mental etiology. Arrangements for a medical or surgical referral may be completed in one visit, whereas it may take weeks before a patient accepts a referral to a psychiatrist.

This can be very taxing on the emotional tranquility of the busy general practitioner, and may cause him to be unintentionally brusque and rejecting to the patient at times. It can be said that a practitioner may have to be a psychiatrist himself to successfully make a psychiatric referral.

What are the difficulties and psychological roadblocks in this process of directing a patient to a psychiatrist? Briefly, these are: *When to make the referral and How to make the referral.*

Problems Relating to When to Refer

The decision as to when to make the psychiatric referral rests with the physician; namely, his evaluation of the patient's clinical status and the physician's own emotional needs. Any combination of these factors may operate in a given situation, depending on the physician's personality, training, and experience, as well as the patient's medical requirements.

It is important that the family doctor reach the point where he feels a referral is needed as soon as possible, since prompt recognition of emotional problems is essential for early referral and effective therapy. His ability to recognize early signs of emotional and mental disturbance will aid in differentiating the organic and functional components of the patient's illness.

A complete physical examination should be undertaken, with laboratory and special studies, as a prerequisite in assessing organic factors in any illness. However, detection of organic elements does not lessen the need for investigation of functional components which may have created the physical symptoms or resulted from them. Not infrequently, emotional problems cause physiological and physical incapacities, which in turn lead to further

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the Psychiatric Referral

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emotional problems and additional incapacities, thereby creating a vicious cycle.

A physician need not be a psychiatric diagnostician in order to recognize emotional illness. A psychiatric referral should be considered:

(1) When the family doctor detects emotional problems causing somatic symptoms, poor adjustment to life situations, persistently unrealistic behavior reactions, or indications of marked disturbance in thinking (distortions of reality, delusions, hallucinations, etc.), any one of which the physician feels is beyond his capacity to successfully manage.

(2) When the patient's physical and physiological symptomatology does not respond in the expected manner to the usual therapeutic regime which had been successful with other patients, the physician should be suspicious of functional components that may be involved. For example: a patient who has epigastric distress, for which clinical investigation revealed no organic pathology, and who does not respond to antispasmodics, antacids, and mild sedation.

(3) When the practitioner's attempts to deal with the functional aspects of an illness (including drug therapy, reassurance, suggestions, etc.) are to no avail. For example: a patient with marked anxiety has not responded to moderate doses of sedation or tranquilizers over a reasonable period of time.

(4) When a patient exhibits patterns of thinking, behavior, or expressions of feelings markedly deviant from those the physician observes in his other patients. The doctor's own experience with his many patients can serve as a background frame of reference for normal behavior against which he can recognize psychiatric problems. For example: if, after ten to fifteen minutes of discussion, the patient leaves the doctor extremely confused as to what the problem is, or what the patient wants, the physician can suspect a possible psychiatric thinking disorder.

The physician's own emotional needs and his reactions to the patient, rather than the medical status of the patient, may frequently precipitate the referral. For example: the phy-



sician may become exasperated and frustrated that the patient is not getting well under his care. The patient may become a "nuisance," demanding frequent night calls. The patient may imply or insinuate that the physician lacks sufficient diagnostic acumen because he did not find "something wrong" (i.e., organic) with the patient long ago. This situation may generate a sense of therapeutic inadequacy and impotence in the physician, with resultant feelings of anger and guilt. An intolerable sense of anxiety may thus be fostered in the doctor, hastening and influencing his decision to make the psychiatric referral.

Problems on How to Make the Psychiatric Referral

In the actual process of making the referral, the family physician has to deal with the problem relating to (1) himself, (2) the patient, and (3) the psychiatrist to whom he wishes to refer.

(1) REGARDING HIS OWN PROBLEMS, the physician may be excessively concerned about the patient's negative reaction to suggestions on seeing a psychiatrist. He may feel the patient will be insulted, indignant, and will leave him to seek another doctor. However, it sometimes occurs that when he finally makes the suggestion, the patient surprises him by telling him he was waiting all along for the doctor to take this step.

Another problem may be the physician's inability to admit to himself that there are emotional problems beyond his capacity to handle. He may readily admit this in surgery, radiology, and other specialties, but may be very reluctant to realize this in the field of emotional illness. Therefore, if a patient doesn't respond to his psychotherapeutic endeavors, he may become angry at the patient and proceed to "dump" him on a psychiatrist without careful preparation, remarking casually, "Go call up Doctor X. He'll take care of you now."

The general practitioner may feel extremely uncomfortable and guilty about referring a patient for a type of therapy which may be

relatively costly, for which the patient and his family may have to make some sacrifices, and which may extend over a long period of time. However, the practitioner should realize that if the patient's problem continues unattended, it may be far more costly (i.e., in money, unhappiness, effect on children, etc.) in the long-term view.

(2) REGARDING THE PROBLEM IN DEALING WITH THE PATIENT, the latter may be tormented by many fears about his own personality, psychiatry, and psychiatrists in general. Here the physician can be very helpful in ferreting out the fears, and re-educating and reassuring the patient, in order to expedite the referral.

The patient may be very fearful about what the psychiatrist will do or say. He may fear that he will be hospitalized and given shock treatment, that he will be called "crazy" or lectured on "snapping out of it" (as relatives and friends had done), or that the psychiatrist will deny the existence of physical symptoms and say, "It's only in your mind." Therefore, it is imperative that the family physician ask the patient about his fantasies and his fears about what the psychiatrist will do or say.

The patient usually imagines the psychiatrist in the role of a critical, judging, punitive, symbolic parent substitute who will denounce and reprimand him for his "evil," "wicked," "dirty," "bad" thoughts and feelings. Once these fears are uncovered and exposed, the physician can attempt to alter them with a re-educative approach so they will not impede the referral.

The patient's refusal to accept the emotional aspects of his illness may be another deterrent. This is an important and serious problem with which the physician must deal. As with the psychiatrist, the patient feels the doctor is telling him he is "crazy" and that he should be sent to a mental hospital for shock therapy. Of greater importance in this rejection of emotional illness is his fear of delving into guilt-ridden, frightening thoughts and feelings which, if revealed, might stir up increased anxiety and discomfort. He would rather avoid

and disregard them, sweep them under the psychic rug, and "forget" about them. Perpetuation of emotional conflicts and their psychological and physical consequence are thus inevitable.

Marked concern regarding the social stigma of seeing a psychiatrist is still prevalent. This is evident in fear about what relatives, friends, and neighbors might say, and may become so threatening that the patient recoils from the referral. The patient may also fear family repercussions after revealing "secrets" to the psychiatrist. Family embarrassment (of the husband, wife, parents, etc.) and fear of retaliation against the patient can lead to increased anxiety and a negative reaction to the referral. These areas should be thoroughly explored by the general practitioner in order to alleviate some of these feelings of shame and guilt.

When the family physician suggests a psychiatric consultation or referral, the patient may fear his doctor is deserting him and getting rid of him because he is considered "hopeless." This is particularly true where the patient has been inadequately prepared for this step, and he is likely to feel dumped, deserted, and rejected. This stirs up anger in the patient, which impedes fruitful psychiatric consultative interviews, because the patient is so hostile. Here it is important to reassure the patient that he is not being "dumped" or relegated to a medical wastebasket, that the psychiatrist will be in contact with the practitioner after the initial interview, and will consult him regarding future plans for the patient. This will provide the feeling that the family physician remains the bastion of emotional security until the psychiatric problem is properly evaluated and plans are formulated, and that the family physician is still in control of the total situation.

It would be unwise to indiscriminately reassure the patient with overly optimistic promises regarding the results of a psychiatric consultation or referral. For example: intimating that one or two visits to the psychiatrist will effect a "cure" is misleading. It only fortifies

the patient's fantasy that the psychiatrist will mutter some magical incantations to disperse the emotional demons in his personality, painlessly and quickly. As a result, the patient is confused and disappointed and hostile when the referral does not fulfill this expectation. And subsequent psychiatrically avenues of approach which may be suggested are viewed with suspicion and may be rejected.

(3) THE PROBLEM OF COMMUNICATING WITH THE PSYCHIATRIST before and after the referral may present difficulties. Successful communication is essential for good medical care. Effective use of consultations and the exchange of pertinent information between family physician and psychiatrist is a necessity. Information should flow from the practitioner to the psychiatrist in the process of making the referral, and from the psychiatrist to the physician after the consultation takes place. This particular channelization of communication permits clarification and adequate management of the patient's problem. Therefore, the physician himself, not the patient, should contact the psychiatrist regarding the referral, in advance of arrangements for the patient's appointment.

It is extremely helpful if the general practitioner can clarify in his own mind (before contacting the psychiatrist) in what specific manner the psychiatrist may help him or the patient. Specifying the *purpose of the referral*, whether for evaluation of personality structure, management suggestions, psychiatric therapy, or psychiatric diagnosis, facilitates a rapid approach to the unique consultative problem involved with a particular patient.

Since the family physician is not in a position to decide on the psychiatric needs of the patient without consultative help, it is often valuable to refer the patient for one or two consultative interviews. The use of one consultation visit to a psychiatrist, or a series of visits in consultation, has many advantages. Patients may go on for years unaware that emotional factors are precipitating and maintaining disturbing symptoms. As the family physician utilizes surgical, radiological, gynecological consultations, so should he use psy-

chiatric consultations. With information gleaned from the latter, the psychiatrist can then communicate with the physician regarding the specific problem or problems with which the physician and patient desire assistance. The psychiatrist can help him understand what he is dealing with in the patient, how serious are the patient's psychiatric problems, what possible constructive steps may be taken, and what the prognosis may be. Recommendations can then be made for further medical planning under the care of the family physician, thus alleviating some of the physician's anxieties and doubts in this area. And

if the practitioner has the time, ability, and interest to work with a patient who can use supportive psychotherapy, the psychiatrist can lend assistance with valuable information gleaned from the consultations. On the other hand, continued psychiatric care may be the indicated approach. This would include psychotherapy, chemotherapy, hospitalization, and/or shock therapies.

The consultation also gives the patient an opportunity to see what the psychiatrist is like, allowing for the establishment of a positive relationship for possible future therapy with the psychiatrist.

Summary

The successful psychiatric referral is based on good communication among the family physician, the patient, and the psychiatrist. There are many difficulties as to when and how to make the referral. The physician's decision to refer depends on evaluation of patient's clinical status and emotional needs within the physician. When actually making the referral,

the physician has to deal with problems within himself, fears within the patient, and successful communication with the psychiatrist. The consultative interview is extremely helpful in planning psychiatric management for the patient.

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PAGE 45a

FDA...

Physician Protection of Foods, Drugs, Devices, and Cosmetics

The nation's foods, drugs, medical devices, and cosmetics are safeguarded by the Federal Food, Drug, and Cosmetic Act, enforced by the Food and Drug Administration. Physicians share in this great health protection service through their public-spirited cooperation and understanding of the provisions of this law, which was enacted in 1938 and gave added protection of the country's food supply and drug products over the original Federal Food and Drugs Act, passed in 1906. With the new law, Federal control of devices and cosmetics was provided for the first time. FDA is responsible also for enforcement of several other laws, including the Federal Hazardous Substances Labeling Act of July, 1960.

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In our complex society, food and drug control is well recognized as a major public health protection resource. With wider medical and public awareness and understanding of its programs, even further benefits can be achieved in protection of health and welfare.

The Food and Drug Administration is a relatively small Federal organization with headquarters in Washington and field offices in seventeen major cities. FDA is headed by the Commissioner of Food and Drugs. The enforcement and technical development activities are conducted through five bureaus and several administrative units. The research laboratories in Washington are constantly studying the safety of ingredients of regulated products, the potency of medicines and vitamins, and adequacy of manufacturing and storage controls. They are also constantly working to devise new and better analytical methods.

The seventeen district offices are equipped with laboratories for analysis of foods and drugs primarily. FDA has about five hundred inspectors in the field, visiting factories and processing plants and searching for samples of violative products. Together, the inspectors and the chemists, all of whom are scientifically trained, and other scientists including physicians, pharmacologists, nutritionists, bacteriologists, pharmacists, pathologists, and others,

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CHECKING THE POTENCY OF COMPLEX DRUG MIXTURES. FDA chemists use the infrared spectrophotometer on those which cannot be tested accurately by chemical analysis. For example, hormones derived from natural sources contain many components very similar in chemical composition but with different potencies. They can be measured by infrared analysis.

develop the evidence which is presented to the Federal courts and at hearings.

FDA is one of the health agencies of the Department of Health, Education, and Welfare. Other health service agencies in this department are the Public Health Service and its National Institutes of Health and Communicable Disease Center, the Social Security Administration, of which the Children's Bureau is a unit, the Office of Vocational Rehabilitation, St. Elizabeth's Hospital, Howard University, and Freedmen's Hospital.

Scope of Coverage

FDA is responsible under the law for products costing consumers \$70 billion annually, and for which the public spends approximately one-fourth of the family income. Over 100,000 industrial and related establishments, including about 1300 manufacturers of ethical drugs, 56,000 drugs and proprietary stores, 319,000 eating places, 2 million growers of fruits and vegetables, 6,000 wholesale fruit and produce dealers, and 16,000 packing sheds, as well as approximately 330,000 lots of foods, drugs, and cosmetics imported into the country annually, are subject to one or more aspects of FDA's regulatory activities. It is obvious that with the existing staff, annual inspection of

each establishment is not feasible, and only a small fraction of one percent of all manufactured products can actually be sampled for examination in FDA laboratories.

There is a rapidly changing complexity to the work of FDA. Advances in food technology, from growing to packaging and distribution, an increased number of new drug formulations and their applications, new hazards of radioactivity in foods and widening application of nuclear energy in medicine, for example, pose a succession of new areas necessitating progressive control.

From the cited magnitude of FDA's responsibility and the available FDA resources of manpower, equipment and facilities, it is apparent that there is a sizable gap between the job to be done and its fulfillment. Only a fraction of the total output of foods and drugs can receive coverage each year.

Legal Protection

The primary purpose FDA meets is to carry out Congressional legislation to insure that foods are safe, pure, wholesome and made under sanitary conditions; that drugs, devices and cosmetics are safe and effective; and that

Photos: Courtesy of Food and Drug Administration.

all of these products are honestly and informatively labeled. FDA is not responsible for advertising of such products, except that which is also labeling. Law-abiding manufacturers and dealers, as well as consumers, need the protection of the law. It safeguards them against unfair competition by inferior or dishonestly labeled goods. Effective enforcement likewise guarantees public confidence in the quality of these American-made and imported products.

Modern scientific methods are required to enforce this law. FDA was one of the first scientific crime-detection agencies. Laws to insure the purity of foods or the potency of drugs, would be impracticable and unenforceable, without methods of scientific analyses to determine whether products are up to standard. When misbranded or adulterated products are encountered, the Government may take legal action in Federal court. The goods may be seized; the responsible agents may be criminally prosecuted, or enjoined from further shipment of offending goods in interstate commerce.

Twelve hundred seventy actions were brought in Federal courts in 1959. The great majority of them were seizure actions, in order to remove filthy, spoiled or harmful products from the market promptly. Generally, when the goods cannot be salvaged, the court orders them to be destroyed. If they can be reconditioned, the court may release them under bond for sorting, cleaning, and relabeling to bring them into compliance with the law. The owner pays for the necessary FDA inspectional supervision.

In 1959 (fiscal year), more than 16 million pounds of unfit or contaminated foods were removed from the market, or 152 tons per week. Less than two percent of FDA's cases are actually contested. Of those that go to trial, FDA wins better than nine out of ten.

Foods and Nutrition

Foods must be wholesome and safe and of adequate nutritional quality. In the interest of consumers, foods must be fully labeled to designate their ingredients, except where the com-

position of the food is set by a regulation called a "definition and standard of identity." Such standards of identity, as well as standards of quality and fill of container, have been set for many foods. The establishment of food standards is a fundamental FDA program.

Many foods used in the management of disease, for infants, the aged, the obese, and the pregnant, must comply with the special dietary labeling requirements of the Act, to furnish the information needed by the user of the particular product. As an aid to distributors and consumers, FDA has specified "minimum daily requirements" for vitamins and minerals for which a need in human nutrition is recognized. Labels for these products are required to state the proportion of the minimum daily requirements of each vitamin which will be furnished by the recommended intake.

The addition of ingredient after ingredient, including minute amounts of so-called trace minerals, has resulted in "shot-gun" formulations containing twenty or more ingredients. Many of these ingredients are not needed to supplement the American diet. Their use is often based upon questionable scientific studies. Additionally, higher and higher doses of the vitamins are being marketed for dietary uses, not because they are needed, but to create the illusion that if a product has ten times the daily requirement, it must be better than competitive products with "only" the minimum daily requirement or two or three times this level. Physicians recognize that some of these nutritional supplements may be hazardous if the dosage is too high. The fat-soluble vitamins and folic acid fall into this category. Folic acid is capable of improving the blood disorders of patients with pernicious anemia while permitting the more devastating nerve changes of the disease to progress unchecked. Recent review of the use of folic acid, including consultation with nutritionists and hematologists, has developed the view that despite the recognition that this is an essential nutrient, there is no need for folic acid to be added to the dietary of this country, except in unusual and infrequent cases requiring medical supervision. Revision



TESTING SOLUTIONS FOR INJECTABLE DRUG PREPARATIONS. In this official U.S. Pharmacopeia, FDA pharmacologists administer injectables to rabbits. They are looking for evidence of pyrogens (matter causing a rise in temperature following injection). Thermocouples lead to each animal for constant temperature readings at panel (right).

of marketing practices involving this substance is currently under consideration.

Unfortunately, in the food field, "nutrition quacks" are all too active, frightening people into a false belief that their diets are deficient in vitamins or minerals, quoting scientific authorities in a misleading way. These promoters persuade people to buy their nutritional supplements to prevent or cure serious diseases. Many house-to-house salesmen make these false medical claims in the privacy of prospect's homes.

Food Poisoning

In the fiscal year 1959, forty-two outbreaks of suspected food poisoning involving approximately twelve hundred persons were investigated by FDA. Staphylococcal contaminations of food continues to be the most common etiologic agent and the majority of outbreaks developed as a result of insanitary handling or lack of adequate refrigeration. The causative agent of a small number of food poisoning outbreaks continues to elude investigators each year.

Pesticide Tolerances

The Federal Food, Drug and Cosmetic Act was amended in 1954 to allow for use of specific chemicals in production of raw agricultural commodities in quantities that will be

safe for consumers. As to the amount of residue of insecticides and other poisonous pesticides which may safely remain on raw crops, scientific data must be obtained by the promoter showing how much residue will be left on the crop and what its potentiality is for causing harm to the consumer of the food. After he obtains evidence that the residue that remains appears to be safe, the promoter may apply to FDA for a tolerance permitting it. Simultaneously, he applies to the Department of Agriculture for a certificate showing that when the pesticide is used as proposed, it is useful. Through this procedure, an allowable tolerance for the chemical is established, after FDA evaluates the applicant's safety evidence. Since this law was passed, about two thousand tolerances for various pesticide residues on specified crops have been set for about one hundred chemicals.

Food Additives

The Act was amended in September 1958 to require that chemicals added in the processing or packaging of food must be cleared by FDA for safety. Proof of safety, including animal feeding studies, must be submitted by the manufacturer. If FDA agrees that the additive would be safe in the amount proposed, regulations can then be published stating the conditions under which the additive may be

used. Until such a regulation is published, the additive may not be used in foods. No additive is permitted which causes cancer in investigational animals given appropriate tests. The additives amendment is a new public health protective service provided to ensure the safety of food chemicals such as nonnutritive sweeteners, preservatives, emulsifiers, stabilizers and thickeners, acids, alkalies, buffers, neutralizing agents, flavoring agents, bleaching agents, bread improvers, sequestrants, glazes, antioxidants, and propellants, among other food additives, to enhance marketability of our processed foods.

Drugs

In the practice of medicine today, the physician has an unusual opportunity to use and prescribe many therapeutic agents which did not exist two decades ago. The pharmaceutical industry, in its keen awareness of the physician's needs, has undertaken the development of new drugs in an unprecedented manner to provide many specific chemotherapeutic agents.



TESTING STERILITY OF INJECTABLE ANTIBIOTIC PREPARATIONS. Here in FDA laboratories, a small amount of the powder or liquid under test is transferred aseptically into thioglycolate media (to test for bacteria) and Sabouraud's liquid media (to test for molds or yeasts).

New classes of drugs have been studied and introduced which have enhanced medical practice. The Federal Government has actively participated to encourage such noteworthy developments and to safeguard this Nation's abundant supply of effective drugs. Today's drugs are the finest we have ever had and represent the high standards the pharmaceutical industry has maintained in their development.

Among the most important drug provisions of the Act are those which require informative labeling as to composition, adequate directions for use, and warnings against misuse where such warnings are necessary for the protection of consumers. The Act prohibits any false or misleading statements in the labeling of a drug. Drugs listed in the *Pharmacopeia of the United States* and *The National Formulary* are required to meet the standards set forth in these compendia. Predistribution certification is required for insulin, certain antibiotics, and coal-tar colors used in foods, drugs, and cosmetics.

New Drugs

A new drug may not be marketed until proof of its safety acceptable to FDA has been submitted in the form of a new-drug application. A product does not have to be an entirely new discovery in order to be a new drug requiring the submission of a new-drug application. It may be a new drug because of a new use or a new route of administration, as for example, a product offered for use by injection which has never before been used except by the oral route.

The label of a drug must bear the name and address of the manufacturer, packer, or distributor, as well as a statement of quantity of contents.

Adequate directions for use are required to be supplied in the labeling of drugs. Those sold for lay use must have proper indications for use and suitable directions for these uses. Drugs which can be safely or efficaciously used only under the supervision of a physician or dentist must bear the statement: "Caution: Federal law prohibits dispensing without prescription." When this exemption is used, the

physician must have available the recommended or usual dosage, the route of administration, if not for oral use, and the quantity and proportion of each active ingredient, and if not for oral use, the names of all other ingredients must also be available to the professional user. With prescription drugs, informative medical brochures are made available for physicians setting forth detailed technical and clinical information relating to the use of the article. For new drugs, which are initially released for prescription use only, descriptive circulars are required to be submitted to FDA for critical review before the drug can be released on the market.

Until such time as a manufacturer has an effective new-drug application, he can distribute his product solely for investigational use only to experts who are qualified to make such investigations. A drug distributed during this investigational state must bear on its label the statement: "Caution: New Drug. Limited by Federal law to investigational use." Also, the manufacturer must obtain from the expert who conducts the investigational studies, an agreement that the drug will be used solely in such studies, and the manufacturer must keep such clinical experience records in his files, and make them available to FDA. The law and the regulations thus seek to limit the distribution of the new drug until its safety is established.

FDA recognizes that the clearance of new drugs is a serious responsibility. No promising drug should be unnecessarily withheld from public use. Yet, release of a new drug, without sufficient testing to establish its safety, must also be avoided. The problem is especially troublesome at times, because none of these potent drugs is safe in the absolute sense. All are capable of doing serious harm, if improperly used. The New Drug Branch of the Bureau of Medicine has the responsibility to reach a determination that the usefulness of a drug outweighs its potential for harm before it permits its release for distribution.

The descriptive material the physician receives on new drugs is of major importance to his sound appraisal of its uses. In reviewing a

new drug application, the accompanying informational material setting forth the indications, dosage, contraindications and precautions that need to be observed is carefully studied prior to release by FDA. Before prescribing a new drug, the physician *should insist on seeing the brochure* which may be in the package or available on request, which sets forth full information about the properties of the drug.

More than twelve thousand new drug applications have been submitted to FDA since 1938. In addition, many thousands of supplements to new drug applications have also been cleared; these cover changes in composition, dosage, processing, etc., that are found desirable after widespread use of the drug. It is estimated that up to ninety percent of prescriptions currently written by physicians are for drugs which have received new drug clearance.

Time-release drugs, which, in some instances, have released their potent ingredients more rapidly or more slowly than the physician expected, have been of special concern. Recently, FDA took the position in the interest of better patient care that a multiple-dose product containing a quantity of active ingredient not recognized as safe for administration as a single dose must have an effective new drug application, including data to establish that the active ingredients will be released as labeled.

Durham-Humphrey Amendment

A provision of the drug law of particular interest to physicians is the so-called Durham-Humphrey Amendment, which deals with prescription drugs. It requires that any drug not suitable for use in self-medication be labeled with the prescription legend quoted earlier. Such drugs may not legally be sold without prescription, and the prescription may not be refilled without the prescribing physician's authorization. It should be emphasized that this restriction to prescription sale applies not only to those drugs which are toxic or habit-forming *per se*, but to any drug, even though it may be comparatively innocuous, if the only rational use of that drug is for a condition which a layman could not reasonably be ex-

pected to diagnose and treat for himself.

This section of the law merits the special attention of the physician because of its intimate connection with the physician-pharmacist-patient relationship. The public generally is not yet fully informed about the public health reasons for restricting many of these drugs to prescription sale, and the cooperation of the physician and pharmacist is needed to prevent ill-will through misunderstanding.

It should be clearly understood that the physician can authorize refilling of his prescription as many times or for as long a time as he feels necessary or desirable. He can do that by notation on the original prescription or by subsequent written or telephoned authorization to the druggist. The legality of the "ad lib" type of refill authorization on the request of the patient for an unlimited time is doubtful, although not settled by a Federal court order. FDA objects to this practice, primarily on the basis that such refill authorization is subject to abuse. In a sense, it takes the patient away from the physician's supervision and allows the pharmacist to determine how often and how long a patient should take a medication.

It is illegal for the physician to sell or dispense potent drugs, unless he prescribes them for legitimate medical reasons. Charges of violation of the Federal food and drug law have been brought against practitioners of the healing arts for selling barbiturates and amphetamine without prescriptions to persons without consultation, case history, physical examination, or diagnosis. Several actions were based on sales of large quantities of amphetamine to persons they thought would resell them to truckers. We think the law needs strengthening in this area.

FDA exerts every effort to maintain the integrity of the drugs prescribed by physicians. For example, two pharmacists in Long Island were prosecuted a year ago for substituting a simple cold remedy for a very much needed antibiotic which was clearly prescribed for use in treating a critically ill child. This willful substitution for the drug specified by the physi-



"ARTIFICIAL STOMACH." Under controlled temperature, simulations of liquids in the human stomach and intestinal tract are used by this FDA pharmaceutical chemist to measure disintegration rate of sustained release tablets.

cian in his prescription was a violation of the Act and the court imposed a heavy penalty on the pharmacists. On many occasions, FDA has taken action against pharmacists for refilling prescription-legend drugs without authorization of the prescribing physician and for over-the-counter sales of restricted drugs without a bona-fide prescription.

Drug Quackery

False or misleading therapeutic claims continue to be a serious problem under the law. Cancer quacks each year continue to take a toll of many lives that could be saved by early and proper medical treatment. These quacks seek to undermine confidence in recognized medical practice. In combatting their activities FDA needs the support of the physician both

in court contests and in educating the public to be on guard against such quackery.

Obesity Cures

The varied products being excessively promoted for weight reduction are another example of drug quackery. Informed medical groups, as well as individual physicians, are protesting this reckless disregard of good health practice.

Medical Devices

The salient requirements of the Act with respect to adulterations and misbrandings of drugs are the same for devices. With the recent introduction of various new devices, especially prosthetic devices used in orthopedic surgery, ultrasonic devices, and other complex and untested apparatus, it is abundantly evident that it would be in the public interest to have the Act amended by Congress to require the pretesting for safety of new devices comparable to that now required for new drugs and food additives.

Imports

Each nation must set up its own criteria for controlling the purity, safety, and informative labeling of foods, drugs, devices, and cosmetics that may be imported. The United States requires imports to meet the same high standards as those set for its domestic products. Coal-tar colors used in these products must be from FDA certified batches and the new-drug procedures already presented also apply to imported drugs.

Poison Control

In children less than five-years-old, salicylates for oral use as analgesics continue to be the leading cause of death due to drugs by accidental ingestion. Such careless use can be prevented by warnings against these hazards. Through special surveys and medical panel discussions, the labeling of these drugs has been modified to safeguard their use. Specific warnings to keep these drugs out of the reach of children and special directions for use in chil-

dren were developed. Children's aspirin has been voluntarily standardized at 1¼ grains per dosage unit and suitable safety closures are being developed and used as a further safeguard.

The rapid introduction of household chemicals has been responsible for many cases of accidental poisoning. The AMA, which sponsored the original Federal Caustic Poison Act in 1927, has developed a model hazardous substances law to cope with this problem. The manufacturing associations in this field also drafted proposed legislation. This has resulted in the recent enactment by Congress of the Federal Hazardous Substances Labeling Act to replace the former law. It applies to household substances which are toxic by ingestion, inhalation, or absorption; corrosive; irritant; strong sensitizers; flammable; radioactive (if named by regulation), or pressure generators, if such articles may cause injury or illness from customary or reasonably foreseeable use, including ingestion by children. Enforcement of the Act begins February, 1961.

FDA has actively participated in the active program to establish Poison Control Centers nationally. In addition, FDA has issued an educational leaflet, "Protect Your Family Against Poisoning," to help create awareness as to ways to prevent accidental poisoning. This informational circular has had extensive and continuing national and international use.

Adverse Reaction Reporting Program

This program, developed with cooperating hospitals for reporting adverse reactions to drugs, is an outgrowth of the pilot study jointly participated in by the American Association of Medical Record Librarians, the American Society of Hospital Pharmacists, the American Medical Association, the American Hospital Association, and FDA. It is designed to develop information promptly as to the untoward effects of drugs, especially new drugs. Such information will be utilized by FDA in the resolution of medical and administrative problems under the Act. In addition, knowledge gained through this program will be dissemi-

nated to the medical and allied professions. Physicians who encounter unusual or severe reactions associated with the use of drugs should report such experiences to FDA, which can be quickly reached through its Washington office or any of its districts in major cities.

Research

In order to enforce the varied provisions of the several statutes, FDA is responsible for a wide range of research activities in progress at all times. The development of analytical or biological methods of identifying and measuring normal constituents of foods, drugs, and cosmetics is a continuing program. Acute and chronic toxicity studies in laboratory animals provide essential information relating to the safety of many ingredients used or proposed for use in foods, drugs, and cosmetics and

must be continued. These studies include a re-evaluation of the safety of coal-tar colors by methods developed after the certified list was established in 1939, after public hearings. Studies which determine the nutritive value of food supplementation by enrichment, and the effects on nutrition of chemical additives used in food are being made. Clinical investigation of drugs and devices in order to establish their therapeutic benefits is frequently necessary to obtain evidence for presentation in Federal court when false and misleading curative claims are alleged. Special surveys are conducted to determine consumer understanding of the labeling of foods, drugs, devices, and cosmetics. Microbiological research is being conducted currently for the purpose of detection, prevention, and control of food poisoning, and to improve the sanitary quality of foods.

Summary

FDA, through its specialized staff, maintains vigilant surveillance over the Nation's supply of foods, drugs, devices, cosmetics, caustics, and corrosives, to assure the protection provided in the statutes it administers. Only with the public-spirited cooperation of physicians and other professional workers can

the public health be fully protected. FDA strives to merit the confidence and cooperation of the members of these professions in the protection of the public health and welfare.

U.S. Department of Health,
Education and Welfare



"OFF THE RECORD . . ."

Share a light moment or two with readers who have contributed stories of humorous or unusual happenings in their practice.

PAGES 25a AND 29a.

THE TREATMENT OF PAIN AND SPASM IN A VARIETY OF

MUSCULOSKELETAL DISORDERS

HUBERT S. BANNINGA, M.D., Youngstown, Ohio

Pain and spasm due to musculoskeletal disorders are among the commonest problems in medical practice today and for which there is great need for more effective therapy.

Baths, plasters, poultices, and hot packs have provided temporary and uncertain relief. Traditional analgesics have been of limited benefit. The usefulness of corticosteroids in arthritis and muscle inflammation has often been offset by serious undesirable side effects. Tranquilizers such as mephenesin, chlormezanone, and meprobamate have been used with moderate success because of their mild muscle relaxant action. However, none of these agents has provided the definitive treatment which has been needed.

Each new drug which gives any indication of special usefulness in the treatment of musculoskeletal disorders deserves careful clinical study. Recently such a new drug has been produced: N-isopropyl-2-methyl-propyl-1, 3-propanediol dicarbamate (carisoprodol).*

Although this new chemical is structurally related to meprobamate, tests on laboratory animals indicate that carisoprodol is about eight times more effective in relaxing induced spasticity. Laboratory tests also showed carisoprodol to be particularly effective in counteracting decerebrate rigidity, a condition which predominates in antigravity muscles. The new

drug thus appears to be the first muscle relaxant which is selectively effective in those muscles that are similarly affected in clinical conditions. Furthermore, carisoprodol has been reported to have a unique analgesic action in that it modifies central perception of pain without abolishing peripheral pain reflexes.†

To test the effectiveness of this new drug, it was administered to fifty-four patients who complained of a variety of musculoskeletal disorders and who appeared for treatment in private practice.

Method

The group was composed of twenty-two males and thirty-two females, who had an age range of eighteen to seventy-six years (Average age, fifty-two). Complaints covered a wide range of musculoskeletal disorders. The diagnoses are shown in Table I.

Carisoprodol was administered in the form of 350 mgms. white, coated tablets. The usual initial dosage was one tablet after each meal

* Carisoprodol was supplied as Soma® by Wallace Laboratories, New Brunswick, New Jersey.

† Berger, F. M., Kletzkyn, M., Ludwig, B. J., Margolin, S., and Powell, L. S.: Unusual muscle relaxant and analgesic properties of N-isopropyl-2-methyl-2-propyl-1,3 propanediol dicarbamate (carisoprodol). *J. Pharm. Exp. Ther.* 127:66-74 (Sept.) 1959.

TABLE 1 RESULTS OF CARISOPRODOL TREATMENT

| | RESPONSE | | | TOTAL |
|-----------------------------------------------------|-------------------|-------|-------------|----------|
| | GOOD EXCELLENT | FAIR | INEFFECTIVE | |
| Muscle spasm | 19 | 2 | 2 | 23 |
| Traumatic muscle injury | 1 | — | — | 1 |
| Whiplash | 4 | — | — | 4 |
| Osteoarthritis | 4 | 1 | 2 | 7 |
| Traumatic exacerbation of osteoarthritis | 1 | — | — | 1 |
| Tension Headache | 1 | 1 | 1 | 3 |
| Nervous tension | 1 | 1 | 2 | 4 |
| Dyspnea | 1 | — | — | 1 |
| Myositis | 1 | — | — | 1 |
| Intercostal neuralgia | 1 | — | — | 1 |
| Osteoporosis | 1 | — | — | 1 |
| Chronic myocarditis | 1 | — | — | 1 |
| Myalgia | 1 | — | 1 | 2 |
| Herpes zoster | 1 | — | — | 1 |
| Chronic degenerative disease of anterior horn cells | 1 | — | — | 1 |
| Parkinson's disease | — | — | 1 | 1 |
| Psychoneurotic | — | — | 1 | 1 |
| Total | 39(72%) | 5(9%) | 10(19%) | 54(100%) |

TABLE 2 DURATION OF CARISOPRODOL TREATMENT

| WEEKS | NO. OF PATIENTS | OFFICE VISITS | NO. OF PATIENTS |
|-------------|-----------------|---------------|-----------------|
| Less than 1 | 3 | 1 | 1 |
| 1 | 4 | 2 | 21 |
| 2 | 7 | 3 | 23 |
| 3 | 7 | 4 | 4 |
| 4 | 7 | 5 | 1 |
| 5 | 1 | 6 | 3 |
| 6 | 7 | 12 | 1 |
| 7 | 1 | | — |
| 8 | 4 | | (Total) 54 |
| 9 | 1 | | |
| 10 | 4 | | |
| 11 | 1 | | |
| 12 | 1 | | |
| 13 | 1 | | |
| 17 | 1 | | |
| 21 | 1 | | |
| 24 | 1 | | |
| 26 | 2 | | |
| (Total) | 54 | | |

TABLE 3 RESPONSE TO CARISOPRODOL TREATMENT

| RESPONSE | NO. OF PATIENTS |
|-------------|-----------------|
| Excellent | 23(43%) |
| Very Good | 12(22%) |
| Good | 4(7%) |
| Fair | 5(9%) |
| Ineffective | 10(19%) |
| Total | 54(100%) |

and two tablets at bedtime. At subsequent visits, the dosage was adjusted according to the response of the patient. In most cases, no additional medication was given during the period of treatment.

To determine the progress of the treatment and arrive at a final evaluation, the following symptoms, when present, were graded from 1 to 4 (reflecting a range from mild to very severe) each time the patient visited the office: muscle pain, joint pain, muscle spasm, limitation of motion, spasticity, stiffness, rigidity, athetosis, tremor, tension, irritability, insomnia (See Table 5).

The therapeutic results were rated as Excellent, Very Good, Good, Fair, or Ineffective.† All patients were closely observed for the appearance of side effects. Thirty-one of the patients had previously received other medications for their illnesses. A comparison of their responses to carisoprodol with their responses to previous therapy provided an additional basis for evaluating the new drug.

Results

Carisoprodol was administered to the patients for periods ranging from one day to twenty-six weeks. Durations of treatment and number of office visits are shown in Table 2.

Treatment was terminated for the following reasons:

1. Symptoms had disappeared.
2. Maximum possible improvement had been reached.
3. Treatment proved to be ineffective.

The responses, rated as described above, are summarized in Table 3. This shows that of the fifty-four patients the responses of forty-three percent were rated excellent and twenty-nine percent good to very good. Nine percent were rated fair and nineteen percent failed to show any response.

A further analysis of responses is shown in

†Excellent—full or nearly full remission of symptoms, Very Good—symptoms greatly relieved, Good—substantial relief of symptoms, Fair—some relief of symptoms, Ineffective—no relief of symptoms.

TABLE 4 COMPARISON OF RESPONSES, CARISOPRODOL vs. PREVIOUS THERAPY

Response of 31 patients with prev. therapy (included in Table 3).

| | CARISOPRODOL | PREV. THERAPY |
|-------------|--------------|---------------|
| Excellent | 8 (25%) | 1 (3%) |
| Very Good | 7 (23%) | |
| Good | 4 (13%) | 4 (13%) |
| Fair | 5 (16%) | 16 (52%) |
| Ineffective | 7 (23%) | 10 (32%) |
| Total | 31(100%) | 31(100%) |

Table 1, indicating diagnoses and corresponding results.

The effectiveness of this new drug can be further evaluated by comparing the results obtained with Soma® in this study with the responses of thirty-one of these same patients to other medications, received prior to this study. These medications covered a broad range including steroids, tranquilizers and other muscle relaxants. Table 4 analyzes and compares the thirty-one patients' responses to previous therapy and to carisoprodol. The superior performance of carisoprodol is clearly apparent from this table. Excellent and very good responses occurred in forty-eight percent of carisoprodol-treated patients, compared to only three percent on previous therapy.

Eleven patients reported drowsiness of varying intensity while taking carisoprodol, with one patient also complaining of accompanying muscle incoordination. Adjustment of the dosage eliminated this complaint and eliminated or reduced drowsiness in most cases.

Case Histories

The following are four case histories which illustrate the benefit of treatment with carisoprodol:

CASE 1: A 55-year-old physician had a severe whiplash injury of the neck and muscle strain of the upper back. Prior to this traumatic injury, this patient could hear the grating of his cervical vertebra, one against the other, when he moved his head from side to side. x-rays revealed a very severe osteoarthritis of the cervical spine. Treatment of the whiplash

TABLE 5 PROGRESS OF TREATMENT IN 19 PATIENTS WITH EXCELLENT RESULTS

| SYMPTOM | TOTAL NO. OBSERVATIONS (AT INITIAL VISIT) | PROGRESS NOTED AT 2nd VISIT | | | PROGRESS NOTED AT 3rd VISIT | | | |
|----------------------|-------------------------------------------------|-----------------------------|-----------------------|---|-----------------------------|------------------------|--|--|
| | | DISAPPEARED | IMPROVED TOTAL (a) | — | DISAPPEARED | FURTHER IMPROVED(a) | | |
| Muscle Pain | 18 | 9 50% | 9 2 11% | | 6 33% | 1 6% | | |
| Muscle Spasm | 16 | 7 44% | 9 4 25% | | 4 25% | 1 6% | | |
| Stiffness | 15 | 8 53% | 7 2 13% | | 4 27% | 1 7% | | |
| Spasticity | 11 | 6 55% | 5 1 9% | | 3 27% | 1 9% | | |
| Limitation of Motion | 5 | 3 60% | 2 1 20% | | 1 20% | — — | | |

(a) Symptoms sufficiently improved treatment discontinued.

and the osteoarthritis with chlormezanone resulted in severe drowsiness which interfered with the patient's work. After carisoprodol was prescribed, one tablet after meals and two at bedtime, the muscle spasm relaxed markedly and the pain and stiffness were greatly relieved. After six weeks of this therapy, with no other medication, the patient said that his neck felt almost as good as before the whiplash injury. After the medication was discontinued, there was no recurrence of either pain or spasm from the whiplash injury or from the arthritic condition.

CASE 2: A 55-year-old-woman had a whiplash injury and severe sprain of all the dorsal muscles as a result of an automobile accident. In addition, this woman had symptoms typical of menopause and markedly enlarged rheumatic heart. With previous therapy which embraced both drugs and dieting regimen, relief was only fair. She was given carisoprodol and within six months her limitation of motion, muscle and joint pain, muscle spasm and stiffness had completely disappeared.

CASE 3: A 50-year-old male, weighing 315 pounds, complained of marked arthritis in the cervical spine, left shoulder and left arm. Corticosteroids with or without analgesics gave him no relief. After one month of carisoprodol therapy, his muscle spasm had completely relaxed in his neck, left shoulder and left arm. Since carisoprodol was discontinued seven months ago, this patient has suffered no recurrence of his pain and spasm.

CASE 4: A 70-year-old man complained of muscle spasm and pain throughout his entire

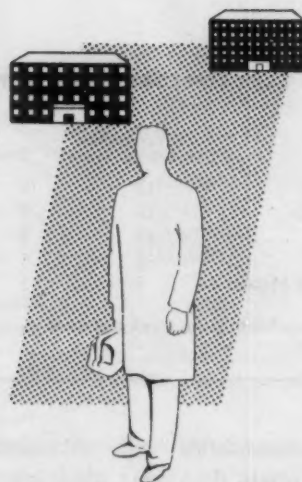
left lower extremity. This was diagnosed as sciatic neuralgia. Other physicians had prescribed various medications, but the patient received no relief from them. After three weeks of carisoprodol therapy, muscle spasm, pain, spasticity, tension and resulting insomnia had disappeared. A month later, the patient complained of pain in his right arm. This, too, disappeared quickly under treatment with carisoprodol; and three months since the discontinuance of the drug, it has not recurred. The action of the drug here is particularly unusual in view of the patient's age.

Summary

Fifty-four private patients, suffering from a variety of musculoskeletal disorders, were treated with the new drug, carisoprodol. Of this group, eighty-one percent showed fair to excellent responses, with forty-three percent experiencing complete relief of their symptoms. Thirty-one of these patients had previously been treated for their complaints with other medications. Excellent and very good responses occurred in forty-eight percent of carisoprodol-treated patients, compared to only three percent on previous therapy. Eleven patients complained of drowsiness, but this was usually eliminated or reduced with adjustment of dosage.

The results of this study indicate that carisoprodol has valuable muscle-relaxant and analgesic properties, and is effective in the treatment of a variety of musculoskeletal disorders.

3031 Market Street



The Physician in Today's Hospital

No one can dispute the fact that the patient is the most important person in the hospital. All efforts should be geared to provide for his needs. Every group associated with patient care will agree with this premise. But the fact remains that in spite of this agreement at no time has there been as many problems among all groups administering to patients. We are not, it seems, working together for the ultimate benefit of the patient. In many areas we find ourselves at odds, or giving barely acceptable service.

WILLIAM A. KOZMA, F.A.C.H.A.
Patchogue, New York

What has become of the tradition in medicine of devotion to the sick as a prime motivation for those working in the whole field of medical care? At one time, this extended from the medical profession through the nursing profession, the domestics, the orderlies, the technicians and, in fact, the entire personnel in the hospital.¹

Today we are facing a serious threat to the voluntary system of hospital care. One has only to pick up his daily paper and read the constant criticism which the hospital business and the medical profession receive as a result of

requests by Blue Cross plans for increases. We are accused of mismanagement and of poor admitting policy causing over-utilization. The end result, according to public clamor, is that our combined inefficiency creates higher Blue Cross premiums and higher medical care costs.

That we are guilty to some degree, is apparent. There is room for improvement in hospital organization and administration. But not so great to totally stem the rising tide of hos-

Mr. Kozma is Administrator of Brookhaven Memorial Hospital, Patchogue, New York.

pital costs. There are factors such as inflation, new and costly drugs, etc., which cannot be controlled completely. Equally, there are specific areas where medical staff cooperation can improve the overall pattern of hospital care and costs. In a preliminary investigation by the New Jersey Blue Cross Study Committee, it was shown that, between 1953 and 1958, costs in the "hotel area" of patient care increased by only 18.5 percent, whereas in the medical area, they increased by 42.5 percent. The committee concluded, therefore, that "how successfully the administrator can control costs is to a very large extent dependent upon the demands and requirements of the attending physician."

There is no doubt that the medical staff is the most important part of the organization of the hospital, the smooth functioning and cooperation of which is absolutely essential, if the combined efforts of the hospital and the medical staff are to succeed in fulfilling the mutual obligation to render service to the community efficiently and economically. Appointment of a physician to a medical staff gives him certain rights and privileges; however, it also imposes certain responsibilities and obligations which he must accept. By assuming a position on the staff, he enters into an agreement with the governing body which is an implied contract making him responsible for certain duties in the hospital and for a cooperative attitude toward it and its activities.³

That many physicians have not lived up to these obligations is evident. However, they have not been lax to the extent which is featured in the popular press, but definitely to an extent obvious to administrative and nursing personnel in the hospital. Obvious also to keen observers such as the Insurance Commissioner of the Commonwealth of Pennsylvania who urged medical societies to institute reforms to eliminate abuses in the use of hospital care.

This laxity is also evident in the findings of a typical survey by the Joint Commission on Accreditation of Hospitals. Too often one can come up with the major deficiencies attributable to the hospital's medical staff. True, the

major part of the survey involves the work of the physician and achieving a high rating depends, to the greatest extent, on medical staff cooperation and willingness to accept its full responsibility. The profession of medicine may at times be vocal in its criticism of the program of hospital accreditation, because it imposes on the medical man certain "musts" in the discharge of his daily routine. But the thoughtful physician, if he is faithful to his pledge, will, in his own conscience, have no criticism, if he stops for a moment to reflect that the final acid test of a project or program is "the ultimate good for the patient who is entrusted in his care."⁴

It is recognized that at no time has the physician been so busy, and at no time has he had to cope with such changing patterns of medical care. His job has never been more demanding, more complex, and never been under such close scrutiny by experts, quasi-experts and run-of-the-mill folk. He finds himself in the unenviable position of justifying his standard of living, his courses of treatment, his ethical standards and hospital practices. It is not too difficult to see that a great many problems face the medical profession. Some of them start in medical school and others are added throughout life. Some answers are found, but there still remains a great many for which specific therapy has not been found. There can be no doubt that relationships with patients are not as good as they once were. The methods used for creating a better atmosphere between the physician and the general public need a careful overhauling. Medicine is experiencing a vast number of changes which involve and affect its total structure and operation. Serious inquiry into the motivation, and the nature and the direction of those changes is necessary.⁴

Some years back, the physician recognized that a hospital in the community made it so much easier for him to provide a comprehensive range of health services for all type patients. As a result, medical care is today something considerably more than medical practice. Increasingly, it is the product of a complex form of cooperation between the medical pro-

fession, administrators, technicians, nurses and a wide variety of other specialized personnel composing the hospital as a community trusteeship. In addition, there has been injected into the situation new forms of community-wide financing and planning which further condition the milieu in which medical-hospital services are performed.⁵

The hospital has become a facilitating agency with reference to the practice of medicine and the medical care of patients. As the trend toward greater specialization continues, hospitals are growing still more complex and, in metropolitan areas, much larger. The character of hospital care has been changing so rapidly that hospitals have been hard pressed to provide the facilities and services that are required. In response to the development of new and more effective method of diagnosis and treatment, they have had to make available more intensive programs of patient care. In addition, hospitals now have to admit a larger number of patients who remain a shorter period of time. They also have to render more service to each patient with a substantially increased ratio of personnel per patient. Thus, hospitals now frequently find it necessary to operate with facilities that were not planned to handle such a larger volume of highly specialized services.⁶

The hospital administrator of today finds himself more and more facing the management problems of a big business. However, he cannot afford, while trying to balance a multi-million dollar budget, to forget that his is a public service organization operated for the benefit of those in need of medical care. It is for this reason that he needs the cooperation of the medical staff, in order to make available to the community the best hospital care at the lowest possible cost. He recognizes full well that his best ally in reaching this goal is the physician, and if the physician is conscious of the hospitals' problems and he can adjust his practice as the need demands, there will be greater benefits to the community.

Years ago, it was simple for the medical staff to focus its attention solely on medical

affairs, but it is not so simple now. We have experienced such remarkable changes in medical science, medical practice and socioeconomic conditions that we find the physician and the hospital with their functions so intermingled that their relationship needs a thorough reexamination.⁷

We appear to be losing our battle at the grass roots for we have not kept the public informed. We have not been successful in getting the public to recognize that hospital and medical care costs more but is worth more. We have not given enough attention in joint effort to promoting the value of the voluntary system of health care. We have passed the public by in the development of scientific medical care.

There can be no doubt that as social financing extends — whether under voluntary or governmental auspices — the interest of the public in the detailed operation of the hospitals will increase. The interest is bound to be expressed through official representatives in federal, state and local governments. It will mean much more exacting systems of hospital inspection and licensure than now exist in any state. The standards now applied under the voluntary Joint Commission on Accreditation of Hospitals will, one day, be adopted by official state agencies.

Equally important, some public agency will sooner or later be set up in every state to exercise control over the construction and location of all hospital beds — not just those built under a construction subsidy program. Otherwise, hospital utilization under insurance, with its resultant costs to the whole public, will not realistically be controllable.⁸

For those who look with alarm at this possibility, one can only say that judicious action by trustees, administrators, physicians, nurses and others in key positions in medical and hospital affairs may delay or even prevent such steps.

Unless we can obtain and hold the full cooperation of all the medical and para-medical personnel who are active in patient care, unless we can provide medical care of the highest

quality to all in need and in an economical manner, and unless we succeed in these areas very soon, we will find ourselves under some control in the future.

Public pressure, whether from people who know all the facts or others who do not, will demand that some form of legislation bring an end to the system of health care we promote. We will succumb to government regulation and control.

Hospital administrators, physicians and

nurses all should have one goal; to surround the patient with all his needs in time of illness or injury.

This should be accomplished as a team. The physician with his more direct role in patient care must be more concerned with the problems of the hospital. He must better understand the many forces that affect hospital operations and he must, at all times, be ready to interpret hospital services to his patients in terms they understand.

References

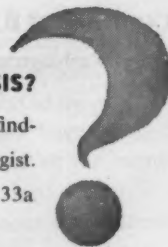
1. Fishbein, Morris: "The Hospital's Fight for Survival," Postgraduate Medicine, June 1960.
2. Ponton, Thomas R.: "The Medical Staff in the Hospital," Physicians Record Co., 1955.
3. Gundersen, Gunnar: "The Doctor's Stake in Accreditation," J.A.M.A., March 13, 1954.
4. Ravdin, I. S.: "The Doctor's Dilemma," Postgraduate Medicine, June 1960.
5. Gladieux, Robert L.: "The Imperatives of Hospital Management."
6. Ibid.
7. Nelsor, Russel A.: "The Physician and The Hospital," Trustee, March 1960.
8. Roemer, Milton I.: "The Hospital Pattern Today and Tomorrow," Hospital Progress, July 1959.

Brookhaven Memorial Hospital

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WALLACE A. COBURN, M.D.

Seattle, Washington

The desire of our patients for a better understanding of that portion of their lives relating to obstetrics, gynecology, and/or fertility, stimulated us, some twelve years ago, to develop an education program for them. Our initial response to this patient-desire, was a series of lectures developed to help the expectant parents better understand the physiologic and psychologic changes associated with a pregnancy. The role of the prospective mother and father was very carefully traced in a series of six lectures supplemented with films or slides. This proved to be extremely rewarding to our patients and to us. This peculiar and possibly individual approach to the teaching of medicine was productive of a marked decrease in the number of spontaneous abortions encountered in our obstetrical practice. Our couples seemed to be happier with one another, and even more content with themselves as individuals. Several articles have been written by our group to share these challenging findings with our colleagues.^{1, 2}

The wife, the husband, or the wife and the husband who desire children, following either a short or a prolonged period of infertility, provide the physician with the most attentive and appreciative student of fertility problems ever to be found. This couple is more often the victim of casualness and lack of interest, than is any other comparable number of patients seeking help from members of our profession. The parents, grandparents, siblings, and assorted relatives, in spite of their own sometimes confused lives, know exactly the magic formula for happiness for the childless in-law or out-law. Each of them has a favorite doctor who possesses the magic cure. It is not surprising that a plethora of misinformation and misconception accumulates in all too short a time. The infertile couple needs and desires the assistance of a sympathetic, interested, knowledgeable physician.

Ten years ago, a monthly group discussion was started with these patients. As is usually the case, during the first year, we doctors learned a tremendous amount about the needs of these childless couples. We were able to

divide them into three rather definite groups, mentioned in a previous communication.³ These are:

1. The wife, and occasionally the husband, feels empty and thwarted because of the inability to reproduce. This same pair usually has a deep-seated and strong sense of envy and antagonism toward their more fortunate friends and neighbors.

2. A smaller group of men and women who are completely happy with their life together and really have no desire for children. They are merely going through the motions of a sterility survey to satisfy the social demands of family and/or friends who had insisted they would be much happier if they had youngsters. This group would be quite upset if pregnancy resulted from their efforts.

3. The thoroughly confused and lost souls in need of an informative educational program.

It seemed necessary for us to visualize and explain to the patient in an orderly and understandable manner the many facets comprising the infertile marriage. A very photogenic, well-adjusted, happy and ex-infertile couple was chosen as the visual aides⁴ to assist in the illustration of the physical and mental components worthy of consideration in a complete survey.

The first contact with the patient is made through our executive secretary with her private telephone, private files, and private office. She is of immeasurable importance to the patient's initial impression and to the continuity of each couple's treatment. This person assumes a key role in our group and is depended upon to present our clinic in a most favorable atmosphere. We encourage the husband to attend the initial interview with the doctor. Although we rarely achieve this goal, we do not lose sight of the importance of a talk with the husband at the earliest possible date so that some valid impression may be obtained.

It is our policy to perform a complete physical examination on the female partner at the time of the first interview and to suggest that the husband be attended in a similar manner by an internist in our group. This fosters better understanding and cooperation on the part

of the male. A Rubin's test, endometrial biopsy and study of sperm morphology are performed the second month of the patient's study. These various procedures are portrayed in detail on film during our group sessions for three specific reasons:

1. In the event of failure of the Rubin's test, we perform a uterotubogram the next month. Duplications of x-rays obtained with unsuccessful and successful uterotubograms are shown to the patients to prepare them for this eventuality.

2. Depiction of an endometrial biopsy has proven an invaluable introduction to the possible or probable use of hormone therapy to produce a more favorable endometrial environment.

3. An explanation of the sperm count, percentage of normal sperm forms, and degree of motility of the sperm is demonstrated in order that the male will be better oriented should it be necessary for him to have vasograms or testicular biopsy.

Basal body temperature charts are shown. This seems to be an area of utter confusion. Many doctors require that charts be kept for several months. Others require rectal temperatures. It has been our experience that temperatures taken by mouth are accurate, if done in a consistent manner and at regular time. Such temperature charts are never recorded beyond a two- or three-month interval. This serves to assure the patient that we are aware of its existence and value, but that *we are not preoccupied with forms*.

We have discovered a similar aversion to coitus by the numbers. We prefer, and have obtained better results, with a more spontaneous demonstration of affection on the part of these couples.

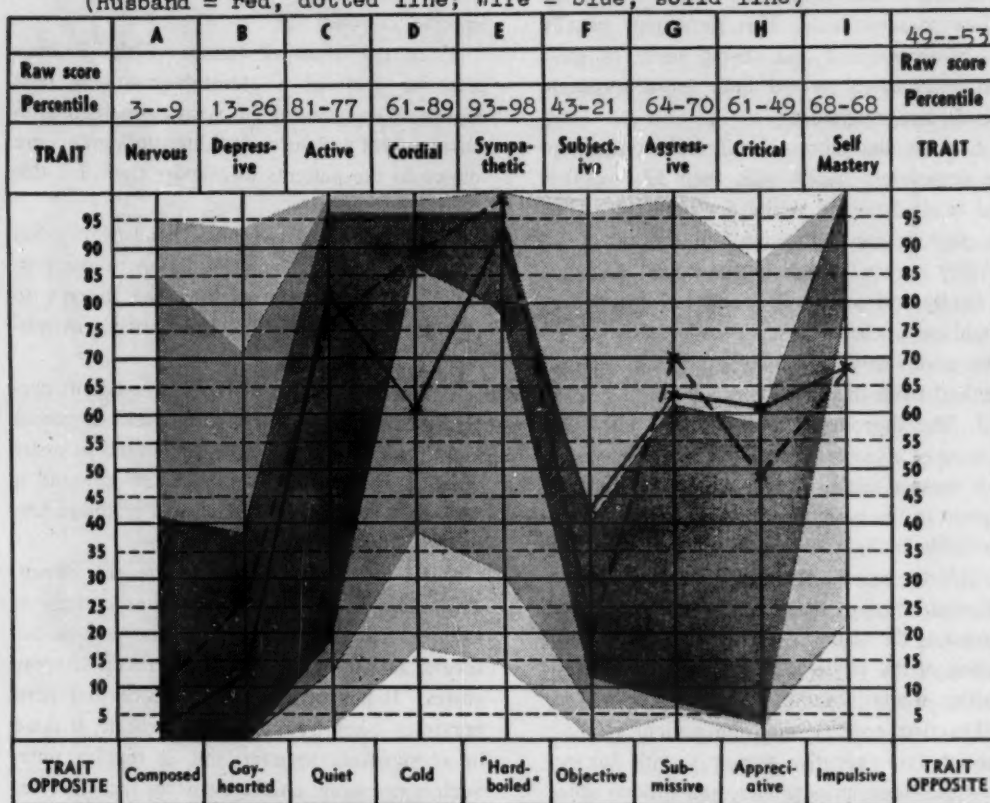
In our old-fashioned way, we prefer the BMR (basal metabolic rate) as a complement to our empiric use of thyroid. Details of this test are also depicted. All other tests for thyroid function are mentioned so that the patient will not belabor us with the latest developments in Reader's Digest, Ladies' Home Journal, et cetera.

JOHNSON TEMPERAMENT ANALYSIS PROFILE*

Profile Revision of February, 1943.

These answers describe SELF as of _____ (date) called S

Answers were made by Self or _____ of the person described.
(Husband = red, dotted line; Wife = blue, solid line)



100—Highest tested 50—Middle person tested 0—Lowest tested

Excellent
 Acceptable
 Improvement desirable
 Improvement urgent

- | | | |
|------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------|
| TRAITS Nervous Depressive Active Cordial Sympathetic Subjective Aggressive Critical Self-mastery | - fidgeting, nervous tension, tics, tremors, apprehensiveness, etc. - being too sad, relative to the circumstances, too much of the time - energetic, undertaking many tasks, lively, etc. - expressively warm-hearted - feeling with others and acting accordingly, responsive to the joys and sorrows of others - poor ability to act logically, because so swayed by prejudice and one's own qualities - attempts to push ahead of others, enjoying domination - criticizing to get the satisfaction of the superior feeling produced by it - control of impulsiveness in the interest of planning | OPPOSITES Composed Gay-hearted Quiet Cold "Hard-boiled" Objective Submissive Appreciative Impulsive |
|------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------|
- No very important decision should be made on the results of adjustment trait scores alone; confirmation by other means is desirable.
- The percentiles are not to be considered as accurate to the nearest unit. The profile should be read as if the percentiles were rounded off roughly by tens in the middle of the scale and progressively less toward the extremes.

CHART 1 (Self) Describes a typical, healthy, well-adjusted couple, who have been and are happily married. As can be seen, most of the scores fall well within the acceptable (dark) area.

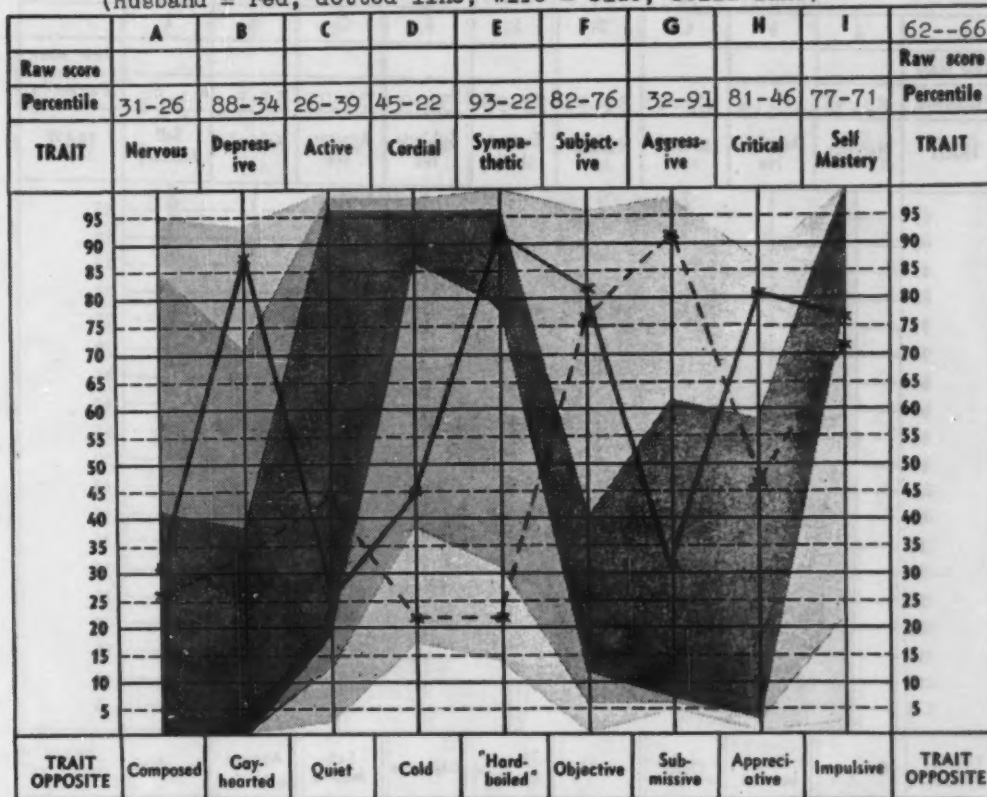
*Copyright 1941, 1945, by Roswell H. Johnson. Published by California Test Bureau, 5916 Hollywood Blvd., Los Angeles 28, Calif.

JOHNSON TEMPERAMENT ANALYSIS PROFILE

Profile Revision of February, 1945.

These answers describe SELF called S
as of _____ (date)

Answers were made by: Self or _____
who is a: husband, wife, father, mother, brother, sister, or _____ of the person described.
(Husband = red, dotted line; Wife = blue, solid line)



100=Highest tested

50=Middle person tested

0=Lowest tested



Excellent



Acceptable



Improvement desirable



Improvement urgent

TRAITS

- Nervous - fidgeting, nervous tension, tics, tremors, apprehensiveness, etc.
- Depressive - being too sad, relative to the circumstances, too much of the time
- Active - energetic, undertaking many tasks, lively, etc.
- Cordial - expressively warm-hearted
- Sympathetic - feeling with others and acting accordingly, responsive to the joys and sorrows of others
- Subjective - poor ability to act logically, because so swayed by prejudice and one's own qualities
- Aggressive - attempts to push ahead of others, enjoying domination
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OPPOSITES

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- Impulsive

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CHART 2 (Angry Profile, Self) Describes the personality maladjustments of an unhappy marriage. Many of the scores fall outside of the acceptable (dark) area, indicating real and potential conflicts.

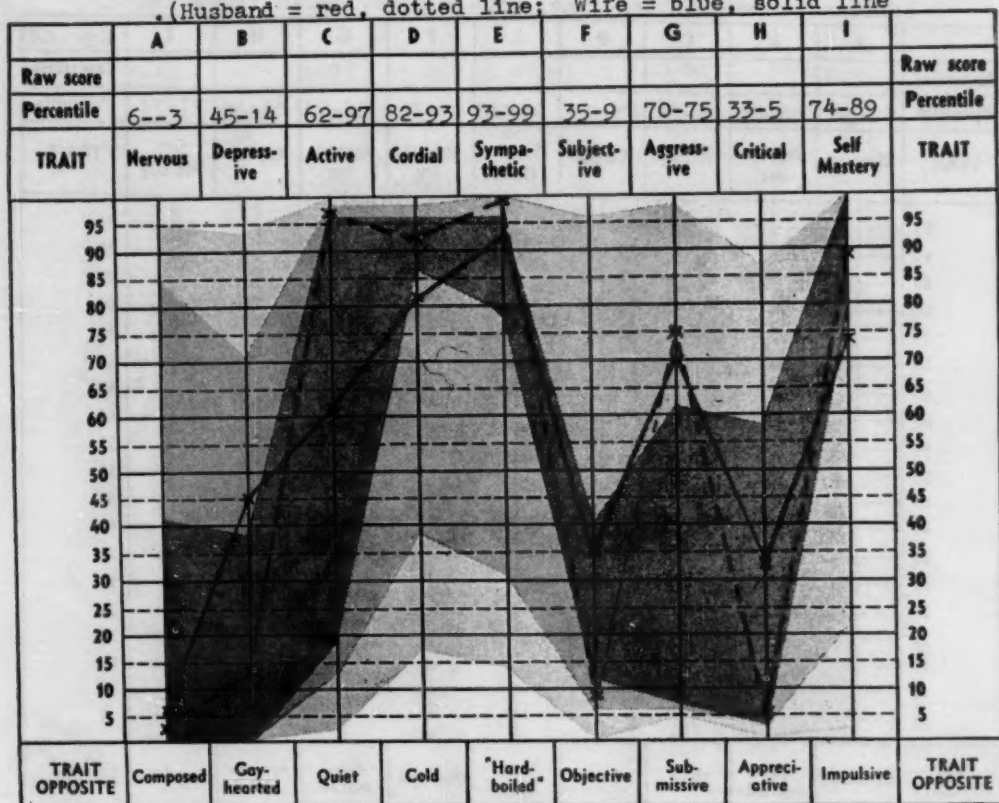
JOHNSON TEMPERAMENT ANALYSIS PROFILE

Profile Revision of February, 1945.

These answers describe MARITAL PARTNERS called S
as of _____ (date)

Answers were made by: Self, or _____
who is a husband, wife father, mother, brother, sister, or _____ of the person described.

(Husband = red, dotted line; Wife = blue, solid line)



100=Highest tested 50=Middle person tested 0=Lowest tested

Excellent Acceptable Improvement desirable Improvement urgent

TRAITS

- Nervous - fidgeting, nervous tension, tics, tremors, apprehensiveness, etc.
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- Active - energetic, undertaking many tasks, lively, etc.
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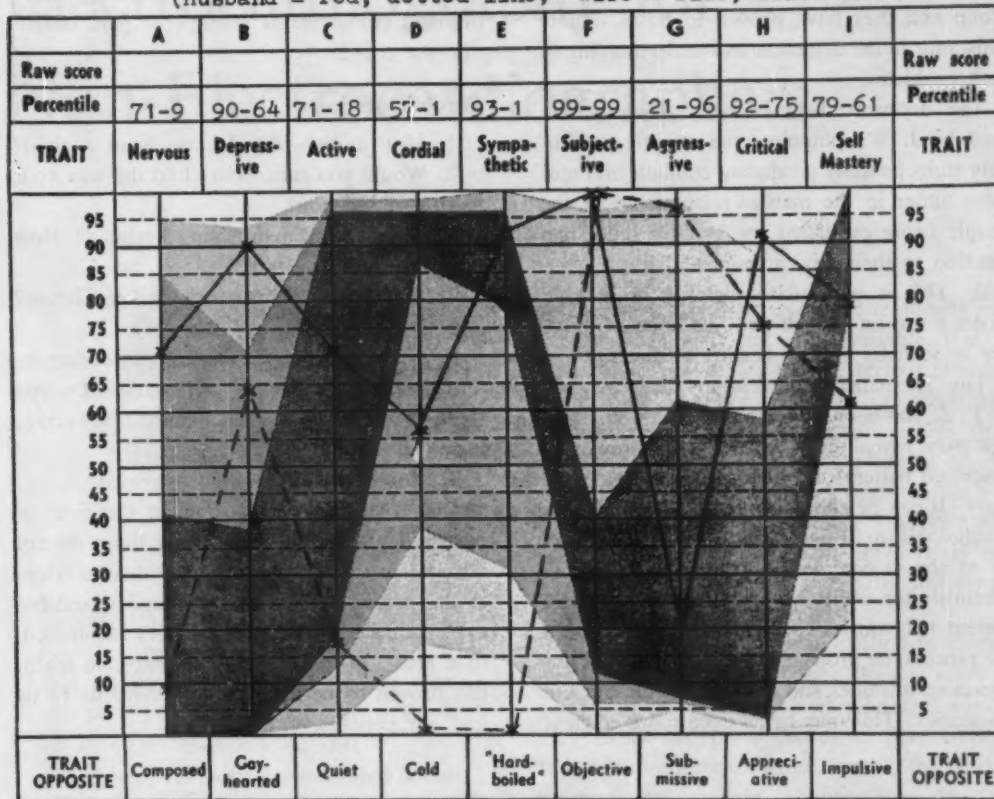
CHART 3 (Good Couple, Each Other) Shows the way a typical well-adjusted couple see each other. The important fact to note here is that each partner is fairly accurate in the way he describes the personality of the spouse.

JOHNSON TEMPERAMENT ANALYSIS PROFILE

Profile Revision of February, 1948.

These answers describe MARITAL PARTNERS called S
as of _____ (date)

Answers were made by: Self, or _____
who is a: husband wife father, mother, brother, sister, or _____ of the person described.
(Husband = red, dotted line; Wife = blue, solid line)



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Excellent

Acceptable

Improvement desirable

Improvement urgent

TRAITS

- Nervous - fidgeting, nervous tension, tics, tremors, apprehensiveness, etc.
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OPPOSITES

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The percentiles are not to be considered as accurate to the nearest unit. The profile should be read as if the percentiles were rounded off roughly by tens in the middle of the scale and progressively less toward the extremes.

CHART 4 (Angry Profile, Each Other) Shows the way a typical neurotic couple see each other, overemphasizing certain traits and criticizing others. This couple would have difficulty viewing each other with any degree of accuracy.

The *physiological* aspects incident to the lives of infertile couples are by now well understood. Therefore, it is time for us to consider the method of evaluation of their *emotional* problems. We have added two clinical psychologists (J. W. and F. Z.) to our fertility group and they have proven to be of infinite assistance in the detection and understanding of such problems.

The Johnson Temperament Analysis,⁵ as used by J. W., pinpoints the specific personality traits possibly producing conflicts and tensions either in the marital relationship of the couple being evaluated, or in their individual reaction to their environment and life in general. This is particularly helpful, since each writes a test on himself and one upon his partner as seen by him or her (See Charts).

The Thematic Apperception Test,⁶ as used by F. Z., has been of great value, as well. This test may reveal most of what the previously described battery of psychometric testings portrays. It can be administered in an hour by the psychologist-marriage counselor. Often, it can be an almost complete evaluation done by the administrator while the patient is talking. The patient tells stories to a series of pictures. In the process, he projects both conscious and unconscious attitudes and facts about himself into his stories. This may be an even more efficient

method than the ones used previously, as it combines interview and testing. At times, the Rorschach⁷ evaluation may be needed to enforce areas of testing uncertainty.

We, the gynecologists, make use of the Ford Questionnaire,⁸ employing the seven questions outlined below in an attempt to gain insight into the couple.

Ford's Questions

1. *Motivation*—why do you want a child?
2. Would you raise your child the way your mother raised you?
3. What sort of man is your husband? How could you improve him?
4. Would you rather work or keep house?
5. Do you want a boy or a girl?
6. *Sexual Attitudes*: Is there pain during intercourse? Do you enjoy intercourse? Do you think that men or women have the advantage in sexual relations?
7. How many children do you want?

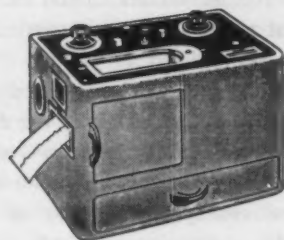
Our friends and associates in the field of psychology and psychiatry many times do not adequately explain the value of their services to the patient. A rational and understandable explanation of the few tests I have mentioned, to a group of infertile patients eager to learn, has proven to be astonishingly valuable to us and our patients.

Bibliography

1. Banks, A. L., Rutherford, R. N., and Brown, Roger A.: Elective Induction of Labor. Read before the Second Annual Meeting District VIII, American Academy of Obstetrics and Gynecology, San Francisco, April 16, 1955.
2. Rutherford, R. N., Banks, A. L., Lamborn, Howard M., Borgen, J. O.: Caudal Anesthesia in Obstetrics With Associated Relaxation Technics. *Western Journal of Surgery, Obstetrics and Gynecology*, Vol. 61, pp. 285-296, June 1953.
3. A. L. Banks, M.D., R. N. Rutherford, M.D., W. A. Coburn, M.D.: Audio-Visual Group Therapy for the Infertile Couple. Presented before the Third World Congress on Infertility and Sterility, Amsterdam, Holland, June 1959. Published: *International Journal of Fertility*, July-Sept. Issue, 1959.
4. A. L. Banks, M.D., R. N. Rutherford, M.D., W. A. Coburn, M.D., S. H. Davidson, M.D., Fred W. Rutherford, M.D.: "A Complete Fertility Survey." 16 mm. color movie.
5. Roswell H. Johnson: *Johnson Temperament Analysis*: California Test Bureau, Hollywood 28, California.
6. Morgan Murray, et al.: *Thematic Apperception Test*: Department of Psychology, Harvard University, 1935.
7. Samuel J. Beck: *Rorschach Test*: Doctor Hermann Rorschach, Three vol. series, published by Grune and Stratton, New York.
8. Ford, E. S. C., et al.: *A Psychodynamic Approach to the Study of Infertility*. *Fertility and Sterility*, Vol. 4, No. 6, Nov.-Dec. 1953, pp. 456-465.

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Electrocardiography for Non-Electrocardiographers



Not requiring meticulously detailed knowledge of electrocardiography, the majority of physicians are faced either with the task of tedious study of a book on a subject they will not employ very often, or of remaining uninformed about it. In the belief that these particular physicians might find useful a resume of what information an electrocardiogram, optimally interpreted, might be expected to provide, this brief review is presented.

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Detroit, Michigan

So many excellent textbooks on electrocardiography are now available, that a wide choice is possible for the serious student of the subject. The majority of practicing physicians, however, are neither serious students of this subject nor have reason to be. It is rare to find, even in smaller communities today, any difficulty in obtaining interpretation of an electrocardiogram, for if there is no cardiologist or internist in that particular town, there is likely to be one near.

Although illustrations ordinarily add clarity to most medical papers, they do not serve a good purpose in this presentation and would very likely add more confusion than clarity. It is not the purpose here to enable the reader to recognize certain abnormalities in the electrocardiogram, but to suggest when and how an electrocardiogram, in a given clinical problem, might be useful.

For optimal interpretation of an electrocardiogram, there are certain prerequisites. A good tracing accurately recorded is one of the most important. Artefacts, electrical or other, always impair optimal interpretations, and when extensive render the reading of little value. Accurate placement of the electrodes

From the Division of Cardiovascular Disease, Henry Ford Hospital, Detroit, Michigan. Work on which this essay is based has received support from the Michigan Heart Association and the United States Public Health Service (H-5197).

on the chest is essential, and an entirely erroneous reading may be honestly made if the reader presumes they were properly placed and they were not. Unless you or your technician can make a clear tracing, and know where the electrodes are to be placed, it is advisable to let someone else make the tracing.

There is reluctance by some physicians to provide clinical information to radiologists or cardiologists for interpretation of roentgenograms or electrocardiograms. Most of the time this is due to the pressure of other work. Sometimes it is believed that a "naked" reading is to be preferred, which is not true. The range of normal in electrocardiograms is quite extensive, and what might be interpreted as normal under certain circumstances would under different clinical circumstances be interpreted otherwise. For the most valuable interpretation, a minimum amount of information necessary includes in addition to identifying data the patient's age, sex, weight, blood pressure, medications being administered, and the referring physician's diagnosis. Almost any medication being given, with the possible exception of laxatives, may affect the electrocardiogram. Cardiac drugs are obviously important to know about, but other drugs, such as chlorothiazide and adrenal cortical steroids, both of which may definitely alter the tracing, can be given for a large variety of non-cardiac diseases.

Even with optimal interpretation, there are certain limitations in electrocardiography. It is widely and correctly taught that an abnormal electrocardiogram does not necessarily mean an abnormal heart. In order to minimize the occurrence of iatrogenic heart disease, this point cannot be overemphasized. It must be added, however, that a normal electrocardiogram does not necessarily mean a normal heart. The clinical evaluation is paramount in assessment of either of these two extremes. If the electrocardiographic findings do not support the clinical findings, one might first check for clerical errors such as proper identification; then it is well to re-scrutinize the clinical findings. If these withstand scrutiny, they are the more important basis for advising the

patient and planning treatment. Rather than discard or ignore the discordant electrocardiographic report, however, it is better to file it mentally as unexplained. Occasionally, later clinical developments may explain the seeming discrepancy.

Serial electrocardiograms, to which some specific references will be made later, may provide information not available from a single tracing. This is particularly true in clinical conditions which are changing. Progress in diseases associated with myocardial injury or inflammation, for example, correlates well with the electrocardiographic changes. The frequency of examinations should be directly proportional to the lability or caprice of the disease being considered.

One of the most widely recognized applications of electrocardiography is in the diagnosis of *angina pectoris* and *myocardial infarction*. During *angina*, the electrocardiogram is rarely normal, and usually is diagnostic of cardiac ischemia. These changes as a rule disappear once the pain has passed. Occasionally, non-specific changes may persist for some hours or a day or two, but these should be read as non-specific and equally compatible with a number of other cardiac problems. When the opportunity for making an electrocardiogram during chest pain presents itself, it should be seized, as it can establish a diagnosis which may otherwise prove to be elusive. If a tracing is made during pain, this information should be included for the electrocardiographer.

In *myocardial infarction*, the electrocardiogram is almost never normal, though unfortunately it sometimes is not diagnostic. Thus a normal electrocardiogram in a patient suspected of infarction is reason for careful search for other cause for the clinical picture. The diagnostic changes of myocardial infarction can be roughly classified as recent or old, but the event can be much more accurately dated clinically. In general, it is exceptional for the changes of a recent infarction to persist as such for more than a few weeks, unless there has developed in addition a ventricular aneurysm. At times it is possible to detect in

the same electrocardiogram both old and recent infarction. Certain disturbances in rhythm (e.g. ventricular tachycardia), or conduction (e.g., left bundle branch block) may not only obscure the typical changes of myocardial infarction, they are also at times due to a myocardial infarction.

Pulmonary Embolism produces characteristic changes in the electrocardiogram. As would be expected from the physiology of the event, these changes consist of myocardial ischemia and acute right ventricular dilation, the latter due to the sudden pulmonary hypertension. If the embolism is small, the electrocardiographic changes may be minor and transient. The longer after the event the tracing is made, the less likely are typical changes to be recorded. During the time of subjective distress and the presence of physical findings indicating recent embolism, the electrocardiogram is most helpful. Often the differential diagnosis includes myocardial infarction, and though the tracing in pulmonary embolism may superficially resemble posterior myocardial infarction, the differentiation of the two conditions is usually not difficult for the experienced electrocardiographer.

For the precise diagnosis of *cardiac arrhythmias* the electrocardiogram is essential. The heart rate does not always have to be rapid nor the rhythm irregular for a serious arrhythmia to be present. In digitalis intoxication and in acute myocardial infarction, a complete heart block with idioventricular rhythm may on physical examination sound regular and in the normal range of heart rate. It is possible to determine by physical examination that a ventricular rhythm is present, but this is at times difficult.

In defining unusually rapid or slow rates, and irregular rhythms, an electrocardiogram should always be made. The treatment for a ventricular tachycardia of one hundred and sixty per minute is entirely different from the treatment of a supraventricular tachycardia at the same rate, and serious complications may be produced by choosing the improper therapy. Prophylactic therapy of paroxysmal disturb-

ances in rate or rhythm, also depends on definition of the exact nature of the disturbance.

For this reason, it is worth making considerable effort to record the rhythm disturbance during a paroxysm. Any lead showing P waves well is suitable for such a tracing, and lead II or VI is usually optimal for this purpose. Too often a false notion of economy or some other reason persuades the recorder to make an inadequate length of tracing during a rate or rhythm disturbance; a minimum of three feet of tracing should be made, and preferably submitted for examination uncut.

Cardiac conduction disturbances are most readily and accurately diagnosed with an electrocardiogram. There are clinical criteria for the diagnosis of bundle branch block (even as to whether right or left) and incomplete AV block, but for the physician who does not often face this question, it is a difficult one. Diagnosis of bundle branch block is important as an indicator of abnormal conduction, but is compatible with entirely normal rhythm and function of the heart. Such abnormal conduction may be congenital, in which case, it is usually of little clinical significance; or it may be due to acquired heart disease, in which case it may be quite serious. It also may be the usual expression of disturbed conduction in a patient who at times has complete AV block transiently.

Complete AV block paradoxically is most serious as a transient disturbance. With stable permanent complete AV block, the heart can function quite efficiently. At the onset of paroxysmal or transient complete AV block, the ventricles are suddenly left without a pacemaker. The heart may cope with this in three ways:

1. The assumption of pacemaking by a focus below the point of block, either in the AV node or ventricles, and an efficient rhythm and action.

2. The assumption of pacemaking by a disorderly focus below the block, producing inefficient rhythm and action, such as ventricular tachycardia or fibrillation.

3. Ventricular standstill, in which no pacemaker takes over. All of these are easily diagnosed on the electrocardiogram. In the second and third instance, the subsequent cerebral ischemia may produce fainting or a convulsion, and is a common mechanism in Stokes-Adams seizures. More will be said of this later. In addition to bundle branch block, incomplete AV block (prolonged atrioventricular conduction time) may be present between paroxysms of complete AV block and thus suggest the nature of the clinical problem. Between paroxysms of complete AV block the electrocardiogram may, in some cases, be entirely normal, however.

Certain *electrolyte disturbances* produce characteristic changes in the electrocardiogram. Of particular clinical value are the changes due to either elevated or lowered levels of calcium or potassium. Some diseases produce alterations in both potassium and calcium levels, e.g., chronic renal disease, and although some feel both changes can be interpreted simultaneously electrocardiographically, others feel this is unreliable. As an indicator of cellular levels of potassium or calcium, the electrocardiogram may be more reliable than the blood levels, since blood and intracellular levels do not necessarily coincide.

In clinical states classically associated with a potassium deficit, such as primary aldosteronism and familial periodic paralysis, the electrocardiogram is usually diagnostic of potassium deficiency and the correct diagnosis is sometimes first suggested from the electrocardiogram. In contrast with clinical states associated with potassium deficiency, which are commonly chronic problems, states associated with excess body potassium are usually acute and often terminal. Minor elevations of potassium level do not produce significant electrocardiographic changes, but the changes due to a markedly elevated potassium level are characteristic and diagnostic. Conditions where the electrocardiogram is useful clinically in relation to the presence of excessive potassium are primarily those where the potassium level may rise quickly, such as during dialysis with an arti-

ficial kidney, and many of the diseases for which dialysis is indicated, such as a transfusion reaction or other causes of acute renal insufficiency.

Both hypercalcemia and hypocalcemia produce characteristic electrocardiographic changes. Of clinical importance is the fact that either an excess or a lack of calcium can occur as a chronic problem, making it more likely to be detected electrocardiographically. An excess or lack of parathyroid hormone is one of the most important causes of abnormal calcium levels. Many bone diseases, including malignant metastases, may produce electrocardiographically-detectable hypercalcemia. In any patient with history of renal stones, this information should be included for the electrographer, for the changes of hypercalcemia though characteristic may be subtle.

Hypertrophy of any of the chambers of the heart usually produces typical changes in the electrocardiogram. When these changes are present, they are highly reliable. Hypertrophy may exist without electrocardiographic changes, however, although it is unusual for this to be true when the hypertrophy is of a clinically significant degree. Additionally, the electrocardiographic changes due to hypertrophy may not be diagnostic of such, and the careful electrocardiographer will read these as suggestive but not diagnostic. The coexistence of other factors which may alter the electrocardiogram diminish its reliability for the diagnosis of hypertrophy. It is not difficult to diagnose the coexistence of left atrial and right ventricular hypertrophy, or of left atrial and left ventricular hypertrophy, but the coexistence of hypertrophy of both ventricles can seldom be diagnosed with confidence.

In addition to hypertrophy, cardiac dilatation without hypertrophy may produce certain electrocardiographic changes which can be recognized. This is particularly true of right ventricular dilatation, such as may occur with pulmonary embolism. Dilatation of other chambers is usually suggested electrocardiographically by alteration of the electrical position of the heart, but it does not indicate

specifically which chamber is dilated.

In experienced hands, the diagnosis of hypertrophy is about equally accurate with either an x-ray or electrocardiogram. In the differentiation of hypertrophy and dilatation, the electrocardiogram is probably more valuable, though clinical information may make this differentiation better than either laboratory modality. Undoubtedly, both electrocardiographic and roentgenographic studies are indicated in all cases of cardiac enlargement, and it is far more frequent for the electrocardiographer and roentgenologist to come to the same rather than different conclusions; the two methods complement rather than supplant each other.

There is occasional misunderstanding of the specificity of the electrocardiographic changes in congenital heart disease. Congenital anomalies which produce right ventricular hypertrophy are associated with electrocardiograms which show this; the hypertrophy picture in the tracing is not diagnostic of the congenital condition, however, but is similar to that produced by any disease which produces right ventricular hypertrophy. In association with physical findings and other clinical information the electrocardiogram may at times add sufficient data to make a specific diagnosis without cardiac catheterization, but it can rarely do this alone.

Involvement of the heart by *inflammatory* or *metabolic diseases* is usually associated with an abnormal electrocardiogram, but these abnormalities are seldom diagnostic of the etiology. Its principal value is in indicating cardiac involvement by a systemic disease which may be diagnosed from other characteristics. One important exception to this is pericarditis, which often produces typical electrocardiographic changes; some cases of pericarditis are associated with minimal or non-specific changes in the tracing, however. The changes due to hypothyroidism or beriberi, characteristic but not diagnostic of these diseases, are more valuable when examined in comparison with serial tracings recorded after treatment, which is usually associated with abolition of

these changes and reversion of the electrocardiogram to normal.

For certain medical specialties, the electrocardiogram may have unique value. In *urology*, for example, the electrocardiogram may be an early indicator of hypercalcemia in a patient with renal stones or chronic renal infection; or chronic renal failure may be associated with hypocalcemia. In a patient with renal disease and hypertension, the presence of left ventricular hypertrophy electrocardiographically is strong evidence that the hypertension is sustained and not paroxysmal or due to the emotional stress of examination in a nervous patient. The urologist, just as any other physician, encounters the problem of pulmonary embolism; and though he may order an electrocardiogram for the sake of assistance in differentiation of myocardial infarction, the tracing is also of value in a positive sense for the diagnosis of pulmonary embolism. Before pulmonary infarction occurs, the electrocardiogram may be of more value than the chest x-ray. It is also simpler to obtain a satisfactory electrocardiographic examination than a satisfactory chest x-ray in an acutely dyspneic ill patient.

Every experienced *neurologist* and *neurosurgeon* knows that syncope or convulsions may be produced by cardiac disease, but in the initial consideration of these problems, this is sometimes overlooked. An electrocardiogram should be one of the first examinations in any unconscious patient whose exact etiologic diagnosis is uncertain. The sooner the electrocardiogram can be made, the better, for many of the cardiac causes for syncope or convulsions are transient or paroxysmal. In addition to disturbances in cardiac rhythm or conduction, other information valuable to the neurologist which may be gained from the electrocardiogram include the suggestion of hypocalcemia (as in tetany), hypokalemia (as in diabetic acidosis), or pulmonary embolism. Acute posterior myocardial infarction, because it involves the blood supply to the AV node, may present as loss of consciousness or even as a convulsion, due to acute heart block. The presence of left ventricular hypertrophy may

suggest aortic stenosis or pheochromocytoma (with sustained hypertension), either of which may produce syncope; both these, of course, have many other identifiable characteristics. It should not be forgotten that the existence of a primary neurologic disease may be influenced by the coexistence of a paroxysmal cardiac arrhythmia or other electrocardiographically detectable problem.

In *oncology*, or for any physician dealing with patients who have cancer, the electrocardiogram may be helpful in a variety of ways. Direct involvement of the heart by the neoplasm may produce arrhythmias, conduction disturbances, pericarditis, pericardial effusion, or myocardial infarction, all of which are detectable on the electrocardiogram. Widespread metastases to bone usually produce hypercalcemia which is apparent in the electrocardiogram. Widespread pulmonary involvement or encroachment on the pulmonary artery may produce right ventricular hypertension and hypertrophy. Pulmonary embolism is common in patients with malignant disease. Patients who have an ileostomy or biliary

fistula may develop hypokalemia. Virtually all these problems are clinically significant and information of help in diagnosing them or dealing with them is of more than academic interest. Because many of these changes are more accurately determinable by serial electrocardiographic examination, it is likely that an electrocardiogram early after the diagnosis of cancer may prove of great subsequent comparative value.

One could continue with similar examples from every medical specialty. And all these special applications may be of even greater value to the physician who practices general medicine and is most likely to make the initial diagnosis.

Some diseases may initially present in a variety of ways; for example, the patient with sarcoidosis (which electrocardiographically may show hypercalcemia, or right ventricular hypertrophy due to pulmonary involvement, or diffuse non-specific changes due to myocardial involvement) may first consult an ophthalmologist, or a dermatologist, or a urologist, or a neurologist, or others.

Conclusion

To be clear, this perspective discussion is not to make electrocardiographers of non-electrocardiographers. It is not to sell electrocardiograms, if there is no information to gain from them. By describing some of the informa-

tion obtainable by careful interpretation of an electrocardiogram, it is hoped it can be made a more useful laboratory examination for those who do not have frequent recourse to it.

Henry Ford Hospital



WHAT'S THE DOCTOR'S NAME

Identify this famous physician from clues in the brief biography.

PAGE 57a

*A Technique for the
Chemotherapy of Cancer*

Isolated Organ Perfusion

BURTON C. EINSPRUCH, B.A., Sc.B., M.D.
New York, New York

Chemotherapy represents a logical attempt to combat malignancy. Whereas the complexities of cancer seem almost insurmountable, they are indeed no more formidable than were many severe bacterial infections fifty years ago.

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Chemotherapy implies the use of a chemical agent to retard, inhibit, or even destroy an offending malignancy. Isolated organ perfusion is simply the use of anatomic compartments to restrict the random spread of the chemotherapeutic material throughout the entire body. The ideal region to treat by this technique would be a cancer having its own blood supply via a single large artery. Since this never actually exists, unless an entire viscus were involved, tumors of the head, neck, leg, extremities, and brain having blood supplies nearly entirely derived from isolated arterial systems, therefore, represent ideal candidates for this approach.

History

Chemotherapy of cancer began approximately twenty years ago, when Gilman et al,^{1, 2} and Dougherty et al,³ became interested in the use of alkylating agents for selective cytotoxic effects. The results of these early studies showed that the technique was feasible, within the limits of total body toxicity. The inadequacy of this technique was, therefore, closely correlated with the choice of agent and the specificity for destruction of usually the gastrointestinal tract or hematopoietic system. The initial therapeutic attempt to give intra-arterial medication for a malignancy was the accidental injection of HN₂ (Methyl-Bis-Amine hydrochloride) into the brachial artery of a patient with Hodgkin's disease. Subsequent to this accident, intense vesiculation and ulceration of the hand and forearm occurred. This later subsided without damage and afforded proof to the concept that highly concentrated chemotherapy could be done on a quasi regional basis.¹

Agents

Needless to say, the ideal drug has yet to be found. The properties of such a compound would be the ease in pre-procedural processing and the ability of the drug to be severely toxic to the tumor site; yet, relatively innocuous to its normal cellular neighbors. Complete ab-

sorption of the compound in its transit through the capillary bed, inactivation before reaching venous channels, and the availability of a specific antagonist are all definitive characteristics of such an ideal compound. Unfortunately, the original group of mustard compounds yet remain the most useful drugs, although fifty thousand drugs have been tested in attempt to find cancerocidal compounds.

Intra-arterial HN_2 (Methyl-Bis-(Beta-Chloroethyl) Amine Hydrochloride) (nitrogen mustard) was reported in 1950 by Klopp, et al.⁴ His results showed that this compound afforded both gross and microscopic reduction of tumors in a small group of patients. Most significant was the immediate reduction of pain in all patients. Not using an extracorporeal technique, his results, although significant, were not as successful as perhaps they might have been.

Creech, et al.^{5, 6} used both HN_2 , PAM (Phenylalanine Mustard) and XCB (Chlorpactin®), and found that in each instance significant regression of tumor was noted, with the exception of pelvic tumors in which the treatments did seem palliative. Malignant melanoma appeared to be the most encouraging example of tumor response when treated with PAM.

The types of agents presently used include alkylating agents, antimetabolites, and antibiotics. The alkylating agents include nitrogen mustard (HN_2), Phenylalanine mustard (PAM) Triethylene Melamine (TEM), and Tri-ethylenethioporamide (thio-TEPA or TSPA).

Antinomycin D (Act. D.) is an antibiotic which acts upon cellular cytoplasm, in contrast to the alkylating agents which are primarily nuclear toxins. Fluorouracil is an antimetabolite producing metabolic blocks at certain sites essential to normal growth and cellular maturation.⁶ AB 100 is a combination antimetabolite and alkylating agent.

Methods

Donovan's method, which was originally designed for intraarterial administration of heparin, was the prototype for many subsequent

investigations.⁷ This simply consisted of the insertion of a polyethylene tube into a proximal arterial branch and then threading the tubing into the artery desired. Sutures were generally used to anchor the tubing to the vessel and skin surface, and a stopcock mechanism was attached to the tubing. Should peripheral vascular branches distal to the cannula supply vital areas not involved by tumefaction, they frequently may be transiently clamped and thereby allow a bypass.

This technique had the major defect of allowing an undeterminable amount of drug to escape into the venous blood return and thereby bathe the entire system with a potentially noxious agent. In a few instances, venous occlusion was used to lessen this hazard, as well as afford higher concentrations within the confines of the circulatory pool. This technique, in spite of mechanical occlusion, did not allow high concentrations to build up and bathe the tumor with a normally effective cancerocidal dose. Extracorporeal circuiting was then attempted. This technique employs the use of a bubble oxygenator, a reservoir, and a Sigma-motor pump, which are attached to the artery by a polyethylene cannula and fed by venous return through a large intravenous catheter. This technique insured controlled time contact and allows greater than physiologic pressures, thereby opening channels to the drug, as well as allowing continual recirculation of drug-containing blood.

Following perfusion, the blood containing the agent may be bled from the system, or if it is felt that the drugs no longer has action, or if dilution renders it relatively harmless, the catheters are withdrawn and the arterial and venous incisions are repaired, thus reconstituting circulation.

Tourniquets may be applied whenever anatomy allows to minimize collateral escape, and suction withdrawal of the venous return may be used if care is employed not to collapse the veins. X-radiation may be used following the perfusion therapy.

No absolute technique exists for the quantitative determination of the amount of cancerocidal

cidal material which is absorbed by the perfused tissues; however, histological findings in treated tissues revealed marked alterations of far greater magnitude than produced by identical intravenous dosage.

Pronounced radiomimetic changes and generally parasympathomimetic changes have been noted and, in nearly every instance, the accessible tumors have shown gross changes varying from ulceration and liquefaction to complete necrosis followed by gradual epithelialization.

The largest series to date was reported by Creech, et al.⁶ Of one hundred and forty-five patients suffering from melanoma, carcinoma, sarcoma, or glioblastoma, the effects classified in one hundred twenty patients revealed a forty-six percent significant improvement, twenty-two percent temporary regression of tumor but followed by recurrence, twenty-five percent no response.

The remaining seven percent died of variety of causes including surgical and chemotherapeutic reasons.

Summary

Granted that earlier diagnosis due to better physician training and techniques, as well as an alertness on the part of the citizenry, has somewhat decreased cancer mortality of diagnosed cases; the increase in numbers of survivors is pathetically small.

New techniques, therefore, must be attempted which approach cancer not as a surgical entity, but rather as a cellular aberration which might respond to a chemical agent.

Knowing so little about the basis of the aberration has nearly essentially heralded the doom of all attempts to cure cancer.

Chemotherapy employing an extracorporeal circuit has been attempted with some encouraging results; however, a true evaluation of this technique is perhaps premature, and awaits the discovery of chemical agents which will sufficiently disturb cancer growth to be called curative.

Bibliography

1. Gilman, Alfred, and F. S. Philips: "The Biologic Actions and Therapeutic Applications of the B-Chloroethyl Amines and Sulfides," *Science* 103:409, 1946.
2. A. Gilman, L. Goodman, G. E. Lindskog, and J. Dougherty: Cited by Gilman & Philips.
3. T. Dougherty, A. Gilman, L. Goodman, and J. Dougherty: Cited by Gilman & Philips.
4. C. T. Klopp, T. C. Alford, J. Bateman, G. N. Berry, and T. Winship: "Fractionated Intra-arterial Cancer," *Ann. Surg.*, October 1950.
5. O. Creech, E. T. Kremenz, R. F. Ryan, J. R. Winblad:

"Chemotherapy of Cancer," *Ann. Surg.*, October 1958, 148:4, 615.

6. O. J. Creech, E. T. Kremenz, R. F. Ryan, K. Reemtsma, J. L. Elliot, and J. N. Winblad: *J.A.M.A.*, 171: 2069-2075, December 1959.

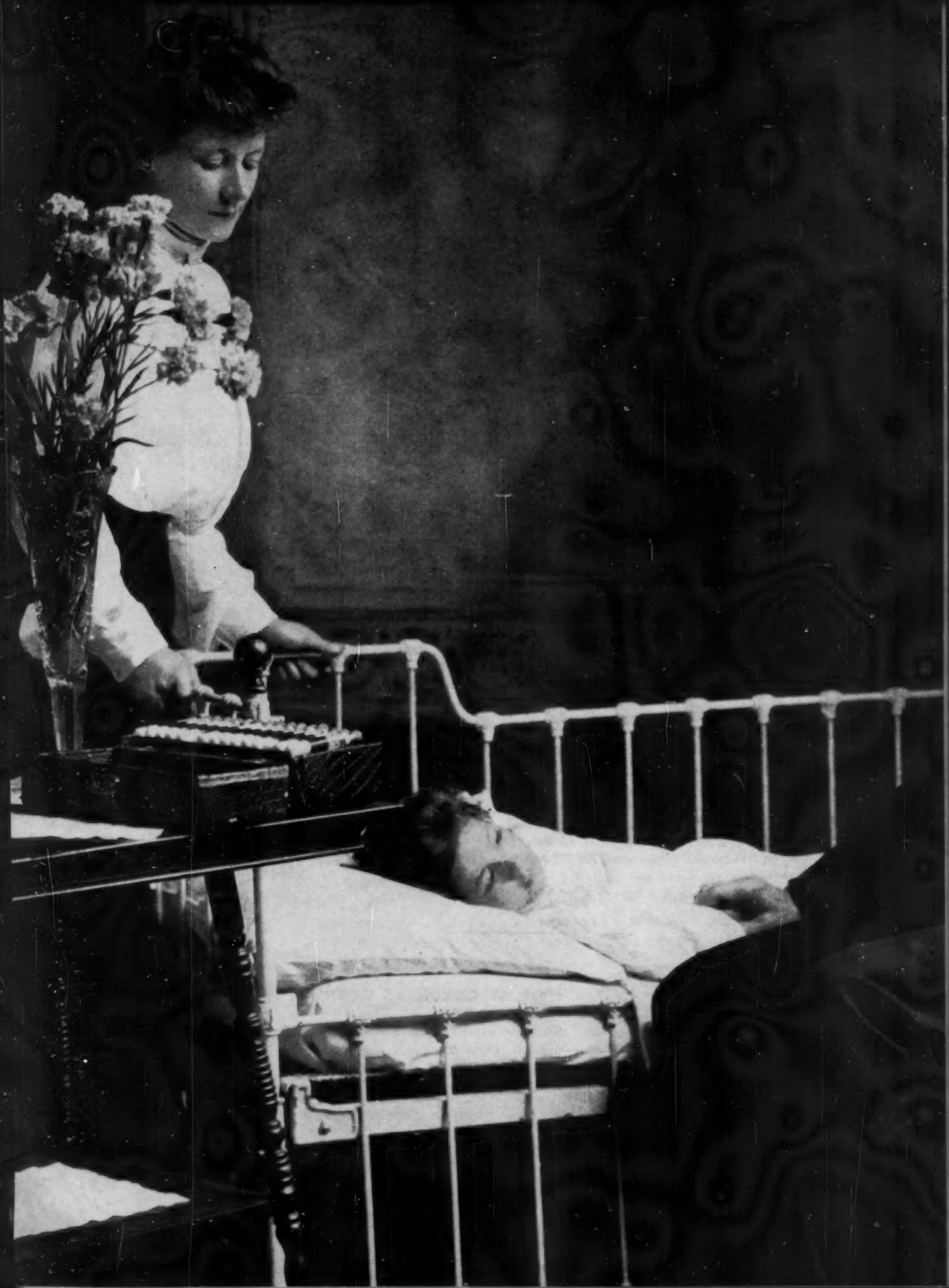
7. T. J. Donovan, "The Uses of Plastic Tubes in the Reparative Surgery of Battle Injuries to Arteries with and without Intra-arterial Heparin Administration," *Ann. Surg.*, 130:1024, 1949.

Montefiore Hospital
Bainbridge Avenue



STOP AT CORONER'S CORNER . . .

Read the stories doctors write of their unusual experiences as coroners and medical examiners. SEE PAGE 38a





**Remember
When...**



Do You Remember When...

Any of us had the courage to pose one like this? If so, please let me have a copy of the picture.

Carnations were always at the bedside (they were cheap)?

When mothers wore shirt waists? (A blouse was a "middy" in these days.)

Photo: The Bettmann Archive

EDITORIALS

PERRIN H. LONG, M.D.



ON BEING A LARYNGECTOMEE

It has now been almost eighteen months since your Editor had his larynx removed for cancer. His thoughts about the problem of suddenly having to face up to the fact that he had cancer were contained in an editorial entitled, "On Having a Cancer" (MEDICAL TIMES, September 1959). Now he would like to discuss from first-hand knowledge the problems, physical and psychic, which confront a laryngectomee.

First off, it should be stated that your Editor after eighteen months is hale and hearty. As a matter of fact, he may be a bit too hale. What was it all like initially? Well, let him say that the operation of laryngectomy as he experienced it in The Johns Hopkins Hospital was really not painful, nor disturbing in any real sense of the word (of course he was lucky not to have needed a dissection of his cervical glands). Actually the only physical discomfort during the first few days was a moderate sore throat and the irritation produced by the nasal tube (an invention of the devil.) Fortunately, he accidentally coughed up his tube relatively early in his postoperative period, and before the boys in white could arrive to do anything about it, he got a glass of warm milk down, so the decision was not to re-insert it. That was a break! He now thinks twice before ordering nasal tubes for his patients.

The next problem concerning which your Editor had previously had very little experience and to which he had given very little thought was the tracheotomy tube. After testing various models, his personal preference is for those made of sterling silver with the inner tube having a rotating flange as a lock. Plastic tubes were unsatisfactory, as the inner tube would easily get stuck due to dried secretions, thus making it difficult to remove. Another type of tube which he tested was a silver-plated tube with the to and fro locking mechanism attached to the upper edge of the flange of the outer tube. Here, the locking mechanism would stick every

now and then and the inner tube would be difficult to remove for cleaning. The importance of being able to get the inner tube out easily and quickly must be stressed not only for purposes of routine cleaning but also because, as happens every now and then, when it plugs, one develops a rather panicky feeling, even though one knows that air can be sucked in around the tube, or simply by untying the tape which holds the tube in place, the whole tube can be removed. The only truly unpleasant part of the postoperative period when one has a tracheostomy tube in, is the use of suction for removing excess secretion from the trachea and large bronchi. With the patient who has an active tracheal or bronchial reflex, suctioning can be — to say the least — a procedure which one does not look forward to with pleasure.

Now, it would appear from our experience that training in the care and use of the tracheostomy tube should begin very early in the postoperative period. Your Editor who has given a great deal of thought in his life to asepsis and antisepsis, had to put himself through a period of retraining when the time was near for him to take full charge of his tracheostomy and his tube. For the lay individual this training should be even more systematic and proper instructions should be included in a specifically worded directive to the patient.

Now, the problem of the stoma seems to me to be still unsolved, at least so far as its proper protection is concerned. Some laryngectomees wear gauze over it. But to me that created a problem, because if one likes to work around the house or garden, one can't help breathing deeply every now and then, and then one has the sensation that the stoma is plugged when the gauze presses against it. Also, if one bends over for any length of time as often happens when one is working in the garden, mucus runs out over one's chest without one being aware of it. All tracheostomies are infested with organisms if not actively infected. At the best, having a tracheostomy is a rather messy affair but by using plenty of shirts with oversized neck bands and always having plenty of soft

tissues ready to cough into, the messiness of this situation can be abated considerably. There is another thing about a tracheostomy which can cause discomfort and which, if precautions are taken, can be ameliorated. This has to do with partial "plugging" of the trachea which at the moment of plugging (or for more or less time afterwards) cannot be immediately coughed out. Here, a wife, or companion, or secretary trained to use a flashlight and a Kelly clamp for the removal of the plug can really produce quick relief. Of course, no one ever suffocates, but one can feel very uncomfortable for hours with inspissated mucus partially plugging the trachea. The relief one gets from its prompt removal is wonderful. Furthermore the overall messiness of the tracheostomy can be decreased by cleaning out the upper part of the trachea of inspissated mucus the first thing in the morning, rather than spending a couple of hours or more coughing it out. Now as would be expected, with a tracheostomy, one feels somewhat better when it is humid. Because of this, it is helpful to inhale steam for five minutes twice or more a day. This can be done very simply by utilizing a metal kitchen measuring cup and a plug-in electrical coil of the type used for heating water for a baby's bottle. Steam is especially valuable when one gets that dry, tight, parched sensation around the stoma and in the upper part of the trachea.

Nothing has been said as yet about the problems of bathing or swimming because one just has to give up taking showers, and obviously swimming is out of the question. And along the same line, one must be cautious about what kind of small craft he goes out in, and what the weather is when he goes fishing, because a laryngectomee is essentially a dead duck if he goes overboard or capsizes. Experimental work done in dogs which had tracheostomies showed that they drowned more quickly than did normal anesthetized dogs.

In concluding the discussion of the physical aspects of being a laryngectomee, it should be stressed that a patient having a tracheostomy should keep out of dust and be careful not to get into swarms of flying insects. Very cold air

is also a little rough at times. However, it should be said that the laryngectomee actually leads a pretty good life as far as his physical handicap is concerned, and with a bit of care, has little to worry about.

Let's now think about the psychic side of being a laryngectomee. You know there has been very little written about this subject, mainly—it can be suspected—because laryngectomees are not too common, and most of them are dedicated individuals who don't bother the psychiatrists. The most I have been able to find out about this phase of the problems of a laryngectomee has been gleaned, I suspect, from somewhat less than completely factual articles generally written about individual speech therapists or a center, and which appear in the lay press. These articles are frequently testimonial in type and of course drip with "human interest."

Let your Editor report his thoughts on and personal experiences in this area. Within the first twenty-four hours, he found that (at least as far as he was concerned) he could whisper the alphabet and whisper quite a few words, i. e., buccal speech. However, the hopes raised by the possibility of utilizing buccal speech soon were dampened, because it could be understood by very few people, and the few who had some idea of what was being said had to be head on to the speaker. This probably meant that comprehension was based on a combination of lip-reading and an understanding of buccal speech. It can be said that this was not very satisfactory, and it soon became apparent that attempts at conversation with one's friends and acquaintances was very difficult both for your Editor and his auditors. Both got worn out attempting to understand what was being said. It was very frustrating for all concerned. Of course, one could always write and, by achieving facility in rapid writing and keeping words to a minimum, for a matter of nine months, practically all activities of your Editor were carried on in writing. But here again, communication by writing is difficult. One is generally two or three minutes behind time when one tries to enter a general conversation

in writing. It really is frustrating to find that by the time you have written out your "quick" retort or your "weighty" remark, that the conversation has completely passed you by. Often by the time the written word has been gotten in edgewise, the other members of the group have more or less forgotten the points which were being stressed in the conversation. *This again is frustrating to all concerned*, and there is a tendency on the part of the laryngectomee to say "to the devil with it," and sink into a nodding, smiling silence rather than slow down the tempo and content of the conversation. It can be said that in the area of decision making, a laryngectomee is not only not at a disadvantage but possibly he holds an advantage over other people, because he has to think about what he is saying while setting it down on paper rather than making snap oral judgments. Your Editor found it possible to administer a very large and complex department of medicine, including getting 22 out of 22 straight interns in medicine through the matching plan, and carrying on many outside activities without the ability to communicate clearly except in writing. It did take, however, about twenty-five percent more time to get things done, and at times it did get him down a bit.

The question should be raised here, "But what about pharyngeal or esophageal speech?" We read in the *Readers Digest* and other publications about the success the esophageal speech method has achieved in restoring speech to laryngectomees. As far as your Editor is concerned, he has only known personally one person who was fluent in esophageal speech (his first speech teacher), although he knows from hearsay that there are others who are just as fluent. However, he has known a number of laryngectomees who were anything but fluent, despite all of the hard work, time, and energy their teacher and they had put in to trying to learn this method of speech. In his own experience, despite lessons four times a week, plus practice sessions ranging from a half hour to an hour a day and frequent tries at speech for eight months, he did not gain any degree of fluency. Of course it can be said

and it might be true, that he did not practice enough. Be that as it may, he had to administer and carry on the affairs of an organization of several hundred individuals (students and faculty), in addition to being concerned with a number of extramural activities. *One has to work to eat.*

One of the things that is interesting in respect to the speech of laryngectomees, is that when one looks up data on their respective abilities to get along with esophageal speech, say one or two years after their larynx is removed, little, conservatively speaking, can be found relative to results of training, be they excellent, fair or poor. Also, it has not been possible to find anything relative to the relation of the operative procedures employed and the results from speech therapy. *Maybe this is all in medical or para-medical literature and has been missed, but it would seem that with the increasing frequency of laryngectomies, a study of long-term results in terms of effective esophageal speech after laryngectomy should be made.*

Shortly after the Editor had his laryngectomy, two types (and later two more) of electrical larynges were brought to his attention. However, two of them were very noisy while the third was quite large and with it certain sounds were very poorly reproduced. The fourth type had good volume but was quite noisy and required extra batteries worn in a pouch attached to one's belt with the speaker attached to a cord. While this worked quite well, it obviously had its drawbacks—a certain degree of clumsiness as well as not doing too well in reproducing certain vowel sounds.

In April 1960, your Editor first came in contact with the physicists in the Bell Telephone Laboratory who were developing a transistorized, mercury battery electrical larynx. After having had different models of this instrument in his possession during the past several months, it can be said that the production model of the Bell Telephone electrical larynx is a very satisfactory instrument from a number of points of view. Its tone is good, the voice reproduction is good, and the volume is such that it can be

easily heard across the room. It reproduces well over the telephone (and it might be added that when one finds that he can't telephone, he really feels alone in the world), and over public address systems. As it has the ability to change pitch, with practice, artificial speech loses its monotony. There are two models of the instrument: 5A (for men) and 5B (for women). The instrument costs forty-five dollars which covers manufacturing costs. It is compact, light (about eight ounces), easy to operate, and the mercury batteries are good for around fifty days of heavy daily usage. This means at current prices, current costs about five cents a day or less, indeed a small price to pay for operational costs. To find out how to obtain one, get in touch with your local Bell Telephone business office. Finally, it is easy to learn how to use, if one remembers not to try to speak or really whisper, but rather forms the words in the mouth and throat without making too much of an effort to have the words audible as a whisper. It should not take long to become proficient. One thing, however, you can't shout and in noisy areas such as at cocktail parties, on subway trains, riding in noisy cars, etc., the volume is such that it becomes a bit of a strain on the auditors because the noise drowns out the sound. One can develop certain individual techniques with the instrument in noisy environments, *but after all most of us talk too much anyway and it is probable that we would be better off not contributing more noise to the already noisy environment.*

Of course, the advent of an improved instrument of this type creates problems. With it a laryngectomee can have very useful and understandable speech within two weeks after his operation. He can conduct his business, use the telephone, talk to his family and acquaintances, and have a feeling of being handicapped in a relatively minor fashion. You see, when within a few hours, you suddenly lose all real ability to communicate (except in writing) with other people in your environment, the sense of frustration which rapidly builds up is devastating. One feels so helpless! Of course people are extremely kind when they realize

you can't talk, and go out of their way to try to help and understand you, but their very solicitude frequently aggravates the mounting feeling of frustration. This is a problem which has to be experienced to be understood. Frankly, your Editor does not know the answer about what should be done with the individual patient. Obviously, it would be splendid if every laryngectomee could learn quickly to speak with the facility that certain individuals acquire after laryngectomy. However, for one alleged reason or another, some individuals never become facile in esophageal speech. Certainly, at the present time, it is not predictable at the beginning who will become masters of esophageal speech and who will become failures. That brings one to the point of suggesting certain factors which must be given consideration. Certainly, the problem of a laryngectomee must be individualized. His age, his physical status, his emotional stability, his environmental situation, his economic status and financial commitments, his job, his civic responsibilities, his financial environment, etc., must be taken into account in arriving at the decision of whether to make a determined attempt to become proficient in esophageal speech, or to depend primarily on the electrical larynx. As examples, certainly thinking in respect to what course a general surgeon, aged fifty-five years, who had just had his larynx re-

moved should pursue, would be quite different from what one might advise an internist of the same age to do. A surgeon must give instructions while operating, and to date this is not possible with an electric larynx. Hence, he must learn esophageal speech. The internist, on the other hand, would be only slightly handicapped in pursuing his practice. These two examples adequately indicate how with each laryngectomee his total life situation must be carefully analyzed before final decisions are made. This has to be, because it is more than likely that if one begins using the Bell Telephone electrical larynx shortly after laryngectomy, one's dependence and liking of it from all points of view will become such that one will not want to take the time or trouble which is necessary, if one is going to attempt to essay successfully a course in esophageal speech. It is hoped that all who are interested in this field will understand that the views presented in this editorial are in no way intended to detract from the splendid efforts of speech therapists over this country to cope with the problems of the laryngectomee. Rather, they are presented in an attempt to reassure the laryngectomee that no matter what happens, an instrument for speech which permits him to communicate freely and accurately with his fellow men is available to him at a very reasonable cost.





THE LONG AND SHORT OF IT

From Your Editor's Travels and Reading

THE CONFERENCE ON ANTIMICROBIAL AGENTS

On October 26th, 27th and 28th, "The Conference On Antimicrobial Agents" sponsored by The Society For Industrial Microbiology was held in the Mayflower Hotel, Washington, D.C. I would judge that more than five hundred were in attendance at one time or the other during the three days of the meeting. While no spectacular new antibiotics for the treatment of disease in human beings were announced, there was a continuous flow of worth-while information during the three days.

I will first take up the reports on the clinical studies. The first paper dealt with observations made by Elmer H. Loughlin of New York and Louverture Alcindor of Port-au-Prince, Haiti on the use of potassium α -phenoxyethyl penicillin, Maxipen,[®] in the treatment of gonorrhea. Using an initial oral dose of 1.0 gram of this compound, followed by a dose of 0.5 gram by mouth twelve hours later, these investigators reported cures in ninety-six out of one hundred patients. The four patients who were listed as treatment failures might very well have been instances of reinfection. These results are to be compared with the observations that currently the failure rate in the treatment with penicillin G of West Indians suffering from gonorrhea has been about twenty-five percent. Somewhat similar results were obtained by

Frank R. Gomila and John E. Linder of New Orleans who tested the effectiveness of Maxipen[®] in the treatment of gonorrhea. They tried various dosages and found that their most effective dosage schedule was one in which 250 milligrams of potassium phenethicillin was administered by mouth b.i.d. for six days. Toxic reactions were minimal in both groups. In the discussion of these two papers, the continuing bug-a-boo, that, while curing the gonorrhea, the amount of penicillin being used might well mask *and not cure*, syphilis which was in the incubation period. This problem has been before us since the initiation of the use of penicillin in the treatment of gonorrhea and syphilis in 1943 and the only sound answer to date has been that one should also administer a dose of repository penicillin, say 1,-200,000 units of benzathine penicillin I.M., at the same time one administered the oral penicillin. This should eliminate the incubating syphilis. James D. Thayer, Francis W. Field and Warfield Garson of Chapel Hill, N.C., reported that in their studies with Synnematin B,[®] (D-4-amino-4 carboxy-N-butyl penicillin) in treating patients suffering from gonorrhea, they had found that in patients known to be allergic to penicillin G, curative doses of Synnematin B[®] (cephalosporin N) could be administered without producing a reaction. These

observers also noted from *in vitro* studies that when gonococci showed varying degrees of resistance to penicillin G, the same was found to be true for Synnematin B®. The next paper by Erwin H. Braff of San Francisco, had to do with the use of Maxipen® in the treatment of syphilis. Twenty-seven young adult males were treated with Maxipen® by mouth in doses of 0.5 grams q.i.d. for ten days. All had dark-filled positive primary or secondary syphilis. The effects in terms of short-time results (four to six weeks post treatment) were very satisfactory. One patient known previously to have been sensitive to penicillin developed a mild dermatitis. Jerome A. Gold of Brooklyn then described his experiences with Maxipen® in the treatment of one hundred patients ill with miscellaneous infections. Significant among them were eleven patients who had subacute bacterial endocarditis. These patients received 1.5 grams of Maxipen® every four to six hours for a minimum of four weeks. All recovered from their infections and at periods from nine to twelve months later had had no recurrences. Furthermore, no allergic reactions, or significant side effects were noted in this group of one hundred patients.

The next paper was the work of John D. Allen, C. Evans Roberts, Jr., and William M. Kirby of Seattle and dealt with the use of 2, 6 Dimethoxyphenyl penicillin in twenty-six patients suffering from non-staphylococcal bacterial pneumonia (eleven patients), from miscellaneous non-staphylococcal infections (three patients), and from significant staphylococcal infections, most of the latter of which were caused by penicillinase-producing staphylococci (twelve patients). *Dimethoxyphenyl penicillin is the form of penicillin, recently described in England and in this country which is effective against penicillinase-producing staphylococci which are resistant to penicillin G, and certain other forms of penicillin.* The drug was administered by the intramuscular route in doses of 1.0 to 1.5 grams dissolved in 2.0 cubic centimeters of sterile distilled water, and was given at four to six hourly intervals. The results obtained appeared to be excellent, and the

drug was well tolerated. One instance of the serum-sickness type of allergic reaction was noted on the twentieth day of therapy, and in another patient, there was peeling of the skin on both hands after two weeks of treatment. The authors concluded, "Dimethoxyphenyl penicillin shows promise of being a safe and effective agent for the treatment of penicillin-resistant staphylococcal infections." *It must be remembered that to date dimethoxyphenyl penicillin can only be administered by the intramuscular route.* A. Gourevitch, J. A. Luttinger and J. Lein of Bristol Laboratories, Syracuse, New York (makers of 2, 6-Dimethoxyphenyl penicillin), reported that this derivative of penicillin "is uniquely resistant to destruction by staphylococcal penicillinase." This is why this type of penicillin is effective against so-called "penicillin-resistant strains of staphylococci."

The next three papers dealt with the properties and use of demethylchlortetracycline (Declomycin®). Two hundred children, ill from various infections, were treated with Declomycin by Lyl D. Asay and Richard Koch of Fontana, California. Over ninety percent of these patients responded favorably to Declomycin. Studies on blood sera of treated patients indicated that adequate blood levels were being obtained in patients receiving ten milligrams per kilogram of body weight of the drug in twenty-four hours. The spinal fluid concentration of the drug was studied in three patients with *uninflamed meninges* and was found to be about five percent of that noted concurrently in the blood serum. Five percent of the two hundred patients had minor side reactions. These authors summarized their observations by stating that "demethylchlortetracycline is as effective as tetracycline and has the added advantage of requiring only 10-15 mg./kg./24 hr. given in divided doses no oftener than every eight hours." Elmer H. Loughlin and William G. Mullin of New York City and Port-au-Prince, Haiti, presented their results following the use of Declomycin in the treatment of chronic amebic colitis. Dosage schedules of 900 mgms. of Declomycin per day

for seven or ten days were used. Roughly ninety percent of the patients on each therapeutic schedule were treated successfully. No untoward reactions were noted other than a mild to moderate degree of anorexia. Dana S. Newton, David Seaman and Francis Furguie discussed their work dealing with the penetration of Declomycin into the intraocular fluids. Their conclusion was "that systemic drug administration is not of value in intraocular infectious diseases."

Two reports were made relative to the use of a new sulfonamide compound, 5-methyl-3-sulfanilamido-isoxazole (Hoffmann-LaRoche, Ro 4-2130) which is a derivative of Gantrisin.[®] The first report, presented by Barbara Braden, J. P. Colmore and M. M. Cummings of Oklahoma City, dealt with the treatment of seven* y-two consecutive patients suffering from bacteriologically proven Beta hemolytic streptococcal infections, there was but one failure. In sixty-five of sixty-six patients who were studied to determine the disappearance of the streptococci, post-treatment cultures were negative. A. W. Czerwinski, J. P. Colmore, Martin M. Cummings and Bernard Brown, all of Oklahoma City reported that they had tested the therapeutic effects of 5-methyl-3-sulfanilamido-isoxazole in the long-term treatment of pyelonephritis (up to three months of therapy). The organisms involved were "Escherichia coli (15), non-hemolytic staphylococci (9), Aerobacter aerogenes (4), Proteus mirabilis (4), and Pseudomonas aeruginosa (3)." The results of therapy were: "two had bacteriologic cure (three successive sterile urine cultures), five had disappearance of initially cultured organisms, and fourteen became asymptomatic . . . ten patients received three months of treatment (two with bacteriologic cure). Treatment was discontinued in 12—5 for lack of response; three were lost to follow up, two because of toxicity; and two died." *Your editor thinks that this study points up the difficulties and problems in the treatment of pyelonephritis. For the cure of some of the victims of this disease, very long-term therapy must be used. Short-term therapy, while often providing*

rather prompt symptomatic relief, rarely produces a cure, deludes the doctor and patient into believing that something real has been accomplished, and permits the disease to pursue its insidious course to disablement and death. After treating patients with antibacterial agents (from the early days of the sulfonamides which he introduced into the therapy of this disease to the latest "mycins"), your Editor, has concluded that prolonged and intensive study and therapy must be carried out as early as possible in pyelonephritis, if significant therapeutic results are to be obtained. Pyelonephritis is not a disease with which to temporize.

Two papers were presented in which data was presented that fixed combinations of tetracycline and novobiocin were antagonistic. James E. Greer of Detroit reported that "the resulting antibacterial activity was slightly greater following the ingestion to tetracycline alone than after the tetracycline-novobiocin combination, suggesting suppression of novobiocin activity." E. L. Foltz and Betty S. Graves of Philadelphia presented data which showed, without question, "that combination of tetracycline and novobiocin, when administered as a single antimicrobial agent, mutually interfere with the absorption of these antibiotics as reflected in serum concentrations." At this point, your Editor would like to re-affirm his stand of many years' duration, that it is not a good therapeutic practice to use mixtures of antibiotics in fixed proportions for the treatment of infectious processes. He favors the use of two or more antibiotics when experimental and clinical data sustain their use. However, each drug should be administered separately in those proportions indicated by the status of the patient who is to be treated. Only too often in his visits to wards of hospitals, he finds antibiotics being administered which are known to be antagonistic to each other, i.e., penicillin and tetracyclines, or in combination with proportions fixed in the dosage form, so that the full additive or the synergistic effect of the two antibiotics cannot be achieved.

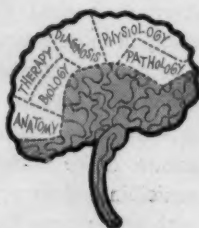
In a paper in which the intraperitoneal

instillation of Kanamycin® at operation in patients suffering from peritonitis was discussed by A. M. Cotlar, F. S. Massari, and I. Cohn, Jr., it was reported that, "intraperitoneal Kanamycin . . . has been safely used as a valuable therapeutic adjunct in clinical cases of intro-abdominal infection." One gram of Kanamycin dissolved in 50 c.c. of saline was administered to seventy-five patients aged seven days to seventy-seven years without toxic reactions. D. W. Gaylor, J. S. Clarke and S. M. Finegold of Los Angeles, reported upon "pre-operative bowel 'sterilization'" in which Kanamycin, neomycin and a placebo was employed. This study was carried out in an older age group, mostly in patients suffering from a malignancy of the bowel. The environment was infected with Staphylococcus aureus, phage type 54, which was resistant to the effects of both Kanamycin and neomycin. This was a frequent secondary invader in this group of patients. Interestingly enough, the placebo group had the lowest postoperative infection rate. The author questioned the value, in their use of antibacterial substances for the pre-operative preparation of the large bowel.

C. E. Roberts, Jr., H. A. Kuharic and W. M. M. Kirby of Seattle presented, "A Clinical Appraisal of Colistin." This antibiotic

is a polypeptide similar to polymyxin B in structure and antibacterial spectrum. It was discovered in Japan and will soon be available in the American market. The study had to do with twenty patients suffering from severe infections with Pseudomonas. Total doses of 2 to 6 mgms. per kilo per day were used, and individual doses were administered by the intramuscular route, two, three, or four times daily. In eleven patients, therapy with Colistin Methane Sulfonate completely eradicated the infection, four patients showed definite infection, two patients had indeterminate results, and in three patients, there was no response. Three of six patients receiving a dosage of 4.5 mgms. per kilo, per day developed paresthesias. The authors believe that Colistin is the drug of choice in severe infections produced by Pseudomonas (pyocyaneus) infections. Your Editor would quarrel with this firm conclusion. He believes that polymyxin B, properly and intelligently used, is a highly effective antibiotic for the treatment of severe infections produced by strains of Pseudomonas. While Colistin is obviously an effective antibiotic, he does not believe there is enough evidence to say that it is the "choice!"

(To Be Continued Next Month)



MEDIQUIZ . . .

Working alone or with your colleagues you'll find this is no snap.

PAGE 73a

Your timely actions before
year-end will determine . . .

Your 1960 Income Tax Savings

HAROLD J. ASHE, Beaumont, California

"I can't be bothered about income tax problems. Every spring I turn over my records to tax counsel, let him worry. That's what he's paid for."

This is what a busy physician recently said to me. There's a serious defect in this method of operation, and that is that counsel is presented with accomplished facts. He can't "worry" a tax saving for his client when, before year-end, the client failed to take *timely* action to make the income tax saving possible.

A physician himself, *before year-end*, may shape many of his actions for an income tax advantage, exercise certain options open to him, make intelligent decisions between alternatives which afford different income tax results. He cannot usually have someone else do these things for him; neither ordinarily is anyone else likely to call his attention to circumstances affording possibility for reducing his income tax.

Only he has a sufficiently intimate knowledge of all aspects of his practice, non-business income holdings and personal and family situations to make the correct decisions looking toward reducing his income tax bill.

It is not necessary that a physician know all of the fine points of the Internal Revenue Code.

This is the responsibility of his tax counsel. However, he should concern himself before year-end with two primary considerations:

- How and where income tax savings, if any, may be made in his 1960 income tax return.

- Whether to take or reject a 1960 tax saving in favor of carrying it over until 1961—if there is such a choice.

Present Earnings and Prospects

Which of two successive years should be selected for trying to hold down *net* professional earnings may hinge on one or more of several circumstances. If a physician's practice is growing rapidly, 1961 net earnings may very likely greatly exceed 1960 net earnings. In that event, thanks to being in a higher tax bracket in 1961, that may be the year in which to concentrate in reducing net earnings subject to income tax.

On the other hand, an aging physician may expect 1961 earnings to be less than those of 1960. He should concentrate in reducing 1960 net earnings. Excessive non-professional income in one year over that of another will qualify the decision. If there is no likelihood 1961 net earnings will greatly exceed those of

1960, the sooner a tax saving is made the better.

Professional Expenses

It is not suggested net earnings be held down by limiting professional services toward the end of the year, although this is an obvious, if expensive, way to reduce an income tax bill. A physician may look around his office, analyze his needs, see which *additional expenses* may as well be incurred in 1960 as 1961. These are *necessary* expenses in which only the timing is in question. If there's no apparent advantage in postponing these necessary outlays until 1961, an immediate tax saving will be realized, with funds so saved made available a year sooner.

These expenses may range from repainting offices to making repairs. As physicians report on the cash-receipts-and-disbursements basis, expenses to be deductible must actually be paid in the tax year—not merely be incurred. Thus, it may pay a physician to not only pay past balances owed suppliers and others but to pay, as far as is practicable, current bills right up to December 31.

This may increase substantially the year's total expenses over what would otherwise be the case. This will reduce net earnings by the exact amount of the increased expenses. Any expense items which, upon payment, are fully deductible in the tax year paid should be scrutinized for tax savings.

Acquisition of Capital Items

It is now possible for a physician to buy qualifying depreciable assets as late as the last day of the tax year and take a depreciation charge in that year's income tax return. He may take an "additional first-year depreciation" charge of 20 percent of the asset's cost in the year acquired. This additional first-year depreciation is available regardless of whether, because of date of acquisition, any normal first-year depreciation is available or not.

Additional first-year depreciation is applicable to assets costing not in excess of \$10,000 (\$20,000 on a joint return with spouse) in any

year, if assets have a useful life of 6 years or more. *It is not applicable to buildings.* It applies to what is technically known as "tangible personal property" used in a business or profession or for the production of income. Assets may be either new or used when acquired.

Additional first-year depreciation is optional, not mandatory. However, it is available only in the year of acquisition. It may not be postponed to or be taken in a subsequent year.

Before year-end, a physician with aging professional equipment of a depreciable nature, may well consider the advisability of acquiring some new equipment, laying the basis for a depreciation charge in his forthcoming income tax return. In fact, most of his office furnishings and equipment may have been written off in full long since. In that event, he has little remaining depreciation, unless he remedies this defect before year-end. The fact that he has small depreciation charges is pretty good evidence his office is obsolete. The sooner this situation is corrected, the sooner he will again benefit, tax-wise, from depreciation charges.

Casualty Losses

Casualty losses sustained in excess of insurance recovery, if any, should be reduced to paper before year-end. In fact, this should have been done immediately after losses occurred. Memoranda should be preserved, become a part of accounting records to be used later in preparing the income tax return. There should be evidence of the nature and extent of the loss and how the amount of the loss has been determined.

Gains and Losses

A physician who has taken a gain during the year should examine his other holdings, consider whether an offsetting loss should be established before year-end.

Income Properties

A good many physicians have real estate investments. There's a tendency for rental property owners arbitrarily to make each property stand by itself, show a net return at all

times. This fails to take into account income tax penalties which may result from this policy. This is a doubtful property management virtue, particularly if repairs and other maintenance needs are overdue. These needs are often neglected on the plea that gross rental income does not permit such outlays; or that such expenditures would sharply reduce net income and even, on occasion, result in a loss for the year.

This policy overlooks two, if not three, important facts. Lack of adequate maintenance may result in a sharp decline in property value with the cost of accelerated obsolescence exceeding the cost of the necessary maintenance "saved."

Additional property expenses should be related to the *property owner's total income from all sources*—not just to the income from the particular property in question. Added rental property expenses not only reduce net income from rentals, they reduce by a like amount a taxpayer's *total* adjusted gross income. Additional rental expense is reflected in an income tax return for a tax reduction *at the rate of the highest tax bracket applicable*.

Example: A physician owns a rental property grossing \$1,200 a year income. Depreciation and property taxes reduce this figure to \$800 a year. This latter figure represents a fair return on the investment. The physician hesitates to have a \$250 paint job done because it will sharply depress net rental income. However, he goes ahead and has the painting done. Because he's in the 30 percent income tax bracket, the net cost of the paint job, income tax savings considered, is \$175.

Physicians investing in real estate with an eye to possible rise in values, and taking a gain, might consider another factor. Properly maintaining a property may result later in a sale at a far more favorable price. At the same time they have the benefit of an immediate income tax deduction for maintenance costs.

Personal deductions already paid before year-end should be itemized, be compared with the standard deduction (10 percent of adjusted gross income up to a maximum of \$1,000)

available on the then estimated adjusted gross income. If itemized deductions are already close to or exceed the standard deduction, a physician should check on the possibility of acquiring additional deductions before January 1, 1961.

Additional deductible outlays usually should be made only on the basis that they are necessary and would be made the following year in any event. This is known as "bunching" deductions in one of two successive years. One year deductions are itemized; the next year, if itemizing falls short of the standard deduction allowance, the latter may be elected. This will represent an overall tax saving for the two years. In some instances, all that is involved is the actual paying of deductible obligations already incurred in 1960, instead of postponing payment until 1961.

Warning: In calculating his deductions, making a decision for or against itemizing, a physician should remember the exclusion rule in respect to medical expenses. The first 3 percent of adjusted gross income so spent cannot be deducted. Forget this qualification in totting up deductions and the wrong decision may be made. The exclusion does not apply on such expenses for taxpayer or spouse age 65 or over.

Exemptions

One or more exemptions may be lost if a physician fails to correct defects before year-end. Exemption loss can come because of failure to observe rules governing exemptions. "Guesstimating" usually isn't good enough, may result in exemption loss.

The rule that a taxpayer must furnish more than one-half of a dependent's support is an arbitrary one. As little as one dollar difference in support contributed may result in loss of an exemption worth at least \$120 in tax reduction. This means (a) careful figuring of a dependent's total support, including his own funds, if any, applied to that support, (b) the amount of support contributed by the taxpayer, and (c) whether the taxpayer's contribution meets the more-than-one-half test.

A physician should carefully figure total support of each dependent separately, together with the amount of his own contribution to the support. Because of differing circumstances, what may constitute more than one-half support for one dependent may not be true for another. Circumstances surrounding the dependent may rule him out as an exemption.

Examples:

Son A, age 19, is employed, earns and contributes to his support \$800. His father contributes more than \$800. He is not an exemption. His earnings exceed the less-than-\$600 ceiling for children age 19 or over not attending school.

Son B, age 20, is employed part-time, earns and contributes to his support \$1,000 a year. He is attending school, and the parent contributes \$1,500 to his support. Parent con-

tributes more than one-half of son's support, may take him as an exemption because of school attendance. The son, despite his age, may earn more than \$600 because of school attendance.

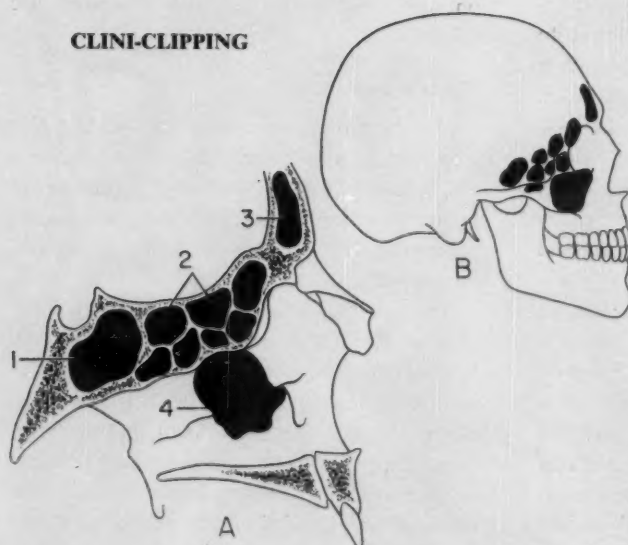
Daughter C, age 17, is employed, earns and contributes to her support \$780 a year. Father contributes \$800. She is an exemption because she is under age 19, which doesn't limit her earnings, and parent contributes more than half of her support.

How well a physician fares in April 1961 with his income tax return will be determined in large measure by how diligently he searches out possible tax savings before January 1, 1961 and avails himself of them. This can be a most financially rewarding do-it-yourself project.

P.O. Drawer 307



CLINI-CLIPPING



THE PARANASAL SINUSES

A. Sagittal Section

1. Sphenoid Sinus
2. Ethmoid Cells
3. Frontal Sinus
4. Maxillary Sinus

B. Surface Projection (Diagrammatic) of the Paranasal sinuses

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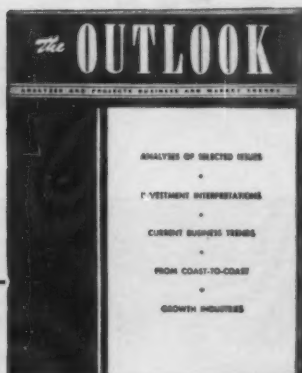
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STANDARD & POOR'S

The world's foremost investment advisory service, analyzes and projects business and market trends for Medical Times readers.

BE ON THE ALERT FOR TAX SAVINGS

Review lists for tax-sale possibilities created by recent market decline—Also watch for opportunities to upgrade portfolios

Tax-loss selling, which is already a factor in the stock market, will be unusually heavy between now and the end of the year. All of the gain recorded by the market since late 1958 has been wiped out. The average share price, as measured by the Standard "500," is down from this year's high, with a sizable number of issues down more than one-third in value. Indications are that sales for establishing tax losses will fully match the volume reached in 1957, the only other period in recent years when the market sustained a comparable setback.

Disturbing as a decline of these proportions may be to shareholders, there are opportunities to salvage part of the paper losses by means of judicious tax sales. Reviews of portfolios for tax-saving possibilities should, of course, be a year-round activity, but it is important to take another careful look in the light of the recent market break and to take appropriate action before the end of the year.

While considering the tax aspect also be on the alert for opportunities to strengthen the investment position of your list through advantageous switching operations. The two can be combined. Upgrading of portfolios should be a prime objective under unsettled market conditions.



Many investors still have sizable paper profits on securities acquired years ago, but have felt "locked in" because of the prohibitive taxes that would have to be paid. This problem can be relieved if you have losses on some of your more recent acquisitions. Here is how to proceed. First, sell your securities priced below cost to establish a tax loss. You can then buy other issues of similar quality and character, or you can repurchase the same issues after thirty days.

Second, sell enough of your "frozen" holdings to absorb the capital loss in the aforementioned transactions. You can buy back immediately the same securities, because there is no waiting period in establishing gains. The advantage here is that you set up a higher cost which will reduce tax liability on a future sale.

The gain or loss established on securities

Lifts depression...



You see an improvement within a few days
Thanks to your prompt treatment and the smooth action of Deprol, her depression is relieved and her anxiety and tension calmed — *often in a few days*. She eats well, sleeps well and soon returns to her normal activities.

as it calms anxiety!

Smooth, balanced action lifts depression as it calms anxiety... rapidly and safely

Balances the mood — no "seesaw" effect of amphetamine-barbiturates and energizers. While amphetamines and energizers may stimulate the patient — they often aggravate anxiety and tension.

And although amphetamine-barbiturate combinations may counteract excessive stimulation — they often deepen depression.

In contrast to such "seesaw" effects, Deprol's smooth, balanced action lifts depression as it calms anxiety — both at the same time.

Acts swiftly — the patient often feels better, sleeps better, within a few days. Unlike the delayed action of most other antidepressant drugs, which may take two to six weeks to bring results, Deprol relieves the patient quickly — often within a few days. Thus, the expense to the patient of long-term drug therapy can be avoided.

Acts safely — no danger of liver damage. Deprol does not produce liver damage, hypotension, psychotic reactions or changes in sexual function — frequently reported with other antidepressant drugs.

Bibliography (13 clinical studies, 858 patients): 1. Alexander, L. (35 patients): Chemotherapy of depression — Use of meprobamate combined with benactyzine (2-diethylaminoethyl benzilate) hydrochloride. J.A.M.A. 166:1019, March 1, 1958. 2. Bateman, J. C. and Carlton, H. N. (50 patients): Meprobamate and benactyzine hydrochloride (Deprol) as adjunctive therapy for patients with advanced cancer. Antibiotic Med. & Clin. Therapy 6:646, Nov. 1959. 3. Beerman, H. M. (44 patients): The treatment of depression with meprobamate and benactyzine hydrochloride. Western Med. 1:10, March 1960. 4. Bell, J. L., Tauber, H., Santy, A. and Pulito, F. (77 patients): Treatment of depressive states in office practice. Dis. Nerv. System 20:263, June 1959. 5. Breitner, C. (31 patients): On mental depressions. Dis. Nerv. System 20:142, (Section Two), May 1959. 6. Gordon, P. E. (50 patients): Deprol in the treatment of depression. Dis. Nerv. System 21:215, April 1960. 7. Landman, M. E. (50 patients): Clinical trial of a new antidepressive agent. J. M. Soc. New Jersey. In press, 1960. 8. McClure, C. W., Papas, P. N., Speare, G. S., Palmer, E., Slattery, J. J., Konefal, S. H., Henken, B. S., Wood, C. A. and Ceresio, G. B. (128 patients): Treatment of depression — New techniques and therapy. Am. Pract. & Digest Treat. 10:1525, Sept. 1959. 9. Pennington, V. M. (135 patients): Meprobamate-benactyzine (Deprol) in the treatment of chronic brain syndrome, schizophrenia and senility. J. Am. Geriatrics Soc. 7:656, Aug. 1959. 10. Rickels, K. and Ewing, J. H. (35 patients): Deprol in depressive conditions. Dis. Nerv. System 20:364, (Section One), Aug. 1959. 11. Ruchwarger, A. (87 patients): Use of Deprol (meprobamate combined with benactyzine hydrochloride) in the office treatment of depression. M. Ann. District of Columbia 28:438, Aug. 1959. 12. Settel, E. (52 patients): Treatment of depression in the elderly with a meprobamate-benactyzine hydrochloride combination. Antibiotic Med. & Clin. Therapy 7:28, Jan. 1960. 13. Splitter, S. R. (84 patients): Treatment of the anxious patient in general practice. J. Clin. & Exper. Psychopath. In press, April-June 1960.

Dosage: Usual starting dose is 1 tablet q.i.d. When necessary, this dose may be gradually increased up to 3 tablets q.i.d.

Composition: 1 mg. 2-diethylaminoethyl benzilate hydrochloride (benactyzine HCl) and 400 mg. meprobamate. **Supplied:** Bottles of 50 light-pink, scored tablets. Write for literature and samples.

▲Deprol▲



WALLACE LABORATORIES / Cranbury, N. J.

EXAMPLE 1

\$3,000 Long-Term Loss; \$2,000 Short-Term Gain

| | |
|-------------------------|---------|
| 100% of long-term loss | \$3,000 |
| 100% of short-term gain | 2,000 |
| Net capital loss | \$1,000 |

EXAMPLE 2

\$3,000 Long-Term Loss; \$2,000 Short-Term Loss

| | |
|------------------------------------------------------------------------------|----------|
| 100% of long-term loss | \$3,000 |
| 100% of short-term loss | 2,000 |
| Net capital loss | *\$5,000 |
| *\$1,000 allowed in one year; balance carried forward over five-year period. | |

EXAMPLE 3

\$2,000 Long-Term Gain; \$1,500 Short-Term Loss

| | |
|----------------------------|---------|
| 100% of long-term gain | \$2,000 |
| 100% of short-term loss | 1,500 |
| Difference | \$500 |
| 50% of difference | 250 |
| Net taxable long-term gain | \$250 |

held for more than six months is classed as long-term, and as short-term if held six months or less. Long-term gains are matched against long-term losses, and short-term gains against short-term losses. Under the law in effect starting with 1952, both long-term and short-term capital losses are taken 100% into account as shown in Examples 1 and 2. However, as illustrated in Example 3, only 50% of a net long-term capital gain is taken into account.

After these calculations, any net capital gain is added to your other income for taxation at the regular normal and surtax rates. However, an alternative tax rate of 25% can be used where there is just a long-term capital gain or an excess of long-term gains over long-term or short-term losses. This alternative method of reporting should be exercised beginning with taxable income of \$18,000 for a single

person and \$36,000 for a married couple filing a joint return. In Example 3, the tax would be computed as 25% of \$500, or \$125.

● **SOME SUGGESTIONS**—First, list your actual gains or losses, long-term and short-term, already realized this year. Second, list your "paper" or unrealized gains or losses, long-term and short-term, on securities still held. Then, measuring the second group against the first, determine which paper gains or losses should be realized to offset losses or gains already established.

Capital Losses—Sell for loss to offset gains in the same year. Some suggested candidates for tax sales are listed in the accompanying Table. The last day for establishing a loss will be December 31, whether on a cash or accrual basis.

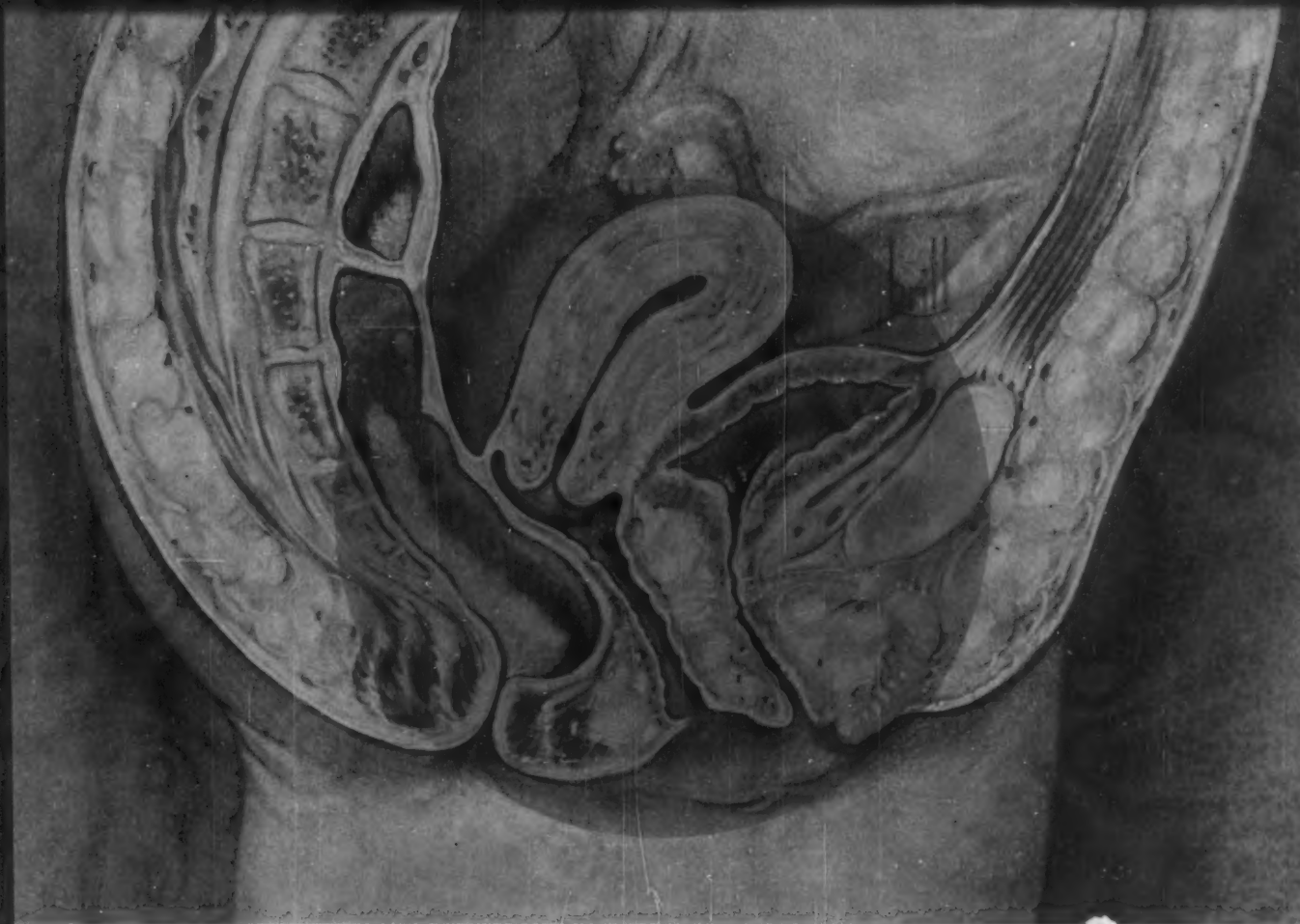
Any excess of capital losses over capital gains may be set off against regular income to the extent of \$1,000. Any remaining unused net loss can be carried over a period of five years to be applied as an offset to future net capital gains and as a deduction from ordinary income not exceeding \$1,000 in each year. For example:

In 1955 X had a net capital loss of \$21,000. He used \$1,000 in 1955 as a deduction from ordinary income. He may then deduct the balance of \$20,000 in the following manner, assuming he had the capital gains shown.

| | 1956 | 1957 | 1958 | 1959 | 1960 |
|-----------------------------------|---------|---------|---------|---------|---------|
| Against net capital gains of None | \$3,000 | \$5,000 | \$5,000 | None | \$7,000 |
| Against ordinary income | \$1,000 | \$1,000 | \$1,000 | \$1,000 | \$1,000 |
| Total (\$20,000) | \$1,000 | \$4,000 | \$6,000 | \$1,000 | \$8,000 |

Long-Term Holdings—If you have a capital loss carryover from a preceding year, plan to sell before the end of this year an amount of stock sufficient to provide a profit equal to your carryover. You thus pay no tax on the profits realized. Also, if you wish, you can repurchase the same stock. (Note: the 30-day "wash sale" rule applies only to losses.)

Long-Term Gains—It is advisable to take a long-term rather than a short-term gain. There is a tax advantage in your favor. You can then immediately reacquire securities sold at a profit, if you desire. December 27 will be the last day for establishing a gain except by cash sale.



BUFFERED TO MAINTAIN A NORMAL, LOW pH...LOW SURFACE TENSION
FOR THOROUGH CLEANSING OF THE VAGINAL MUCOSA...

Buffers in Massengill Powder solution (pH 3.5 - 4.5) inhibit the neutralizing effect of an alkaline mucosa, maintaining a healthy, low pH for 4 to 6 hours in ambulant patients and up to 24 hours in recumbent patients. This low pH represses the propagation of candida, trichomonas vaginalis, and pathogenic bacteria but permits growth of the beneficial Döderlein bacillus. In contrast, an ordinary, unbuffered douche like vinegar is neutralized within 30 minutes after application. ● Low surface tension of Massengill Powder solution (50 dynes/cm.) enables it to penetrate and cleanse all the folds of the vaginal mucosa more effectively than vinegar (surface tension of 72 dynes/cm.). It also makes cell walls of infecting organisms more susceptible to therapy.

MASSENGILL® POWDER

the buffered acid vaginal douche with low surface tension

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PATIENTS PREFER

MASSENGILL[®] POWDER

the buffered acid vaginal douche with low surface tension

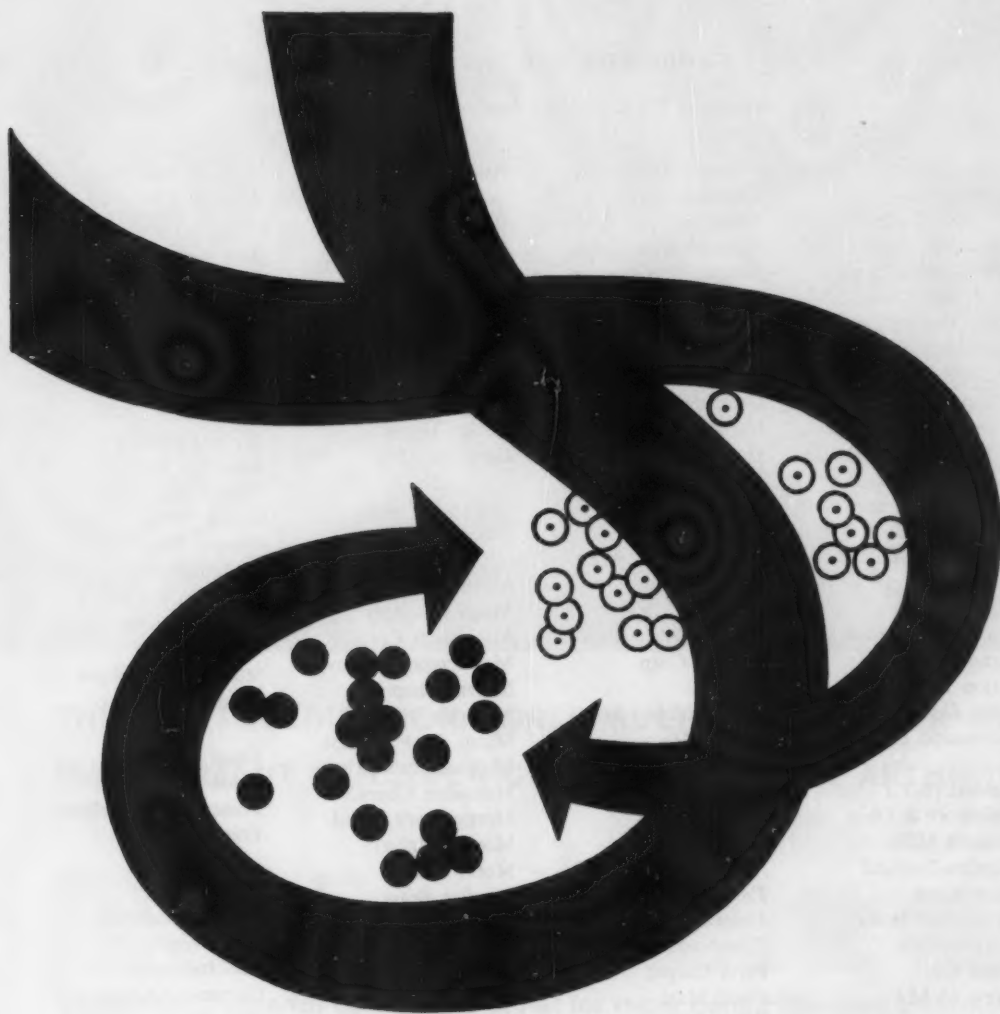
Massengill Powder soothes inflamed tissues, deodorizes, and tends to diminish excessive vaginal secretions. Patients like its clean, refreshing odor.

Massengill Powder is indicated for routine feminine hygiene to guard against infection, and as an adjunct in the management of candida, trichomonas, staphylococcus, and streptococcus vaginal infections.

Contains: Ammonium Alum, Boric Acid, Phenol, Menthol, Berberine, Thymol, Eucalyptol, and Methyl Salicylate. *Write for samples and detailed literature.*

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**Now...the only
Nystatin combination
with extra-active**

DECLOMYCIN®
Demethylchlortetracycline

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Demethylchlortetracycline and Nystatin **LEDERLE**

CAPSULES, 150 mg. **DECLOMYCIN** Demethylchlortetracycline HCl and 250,000 units **Nystatin**..

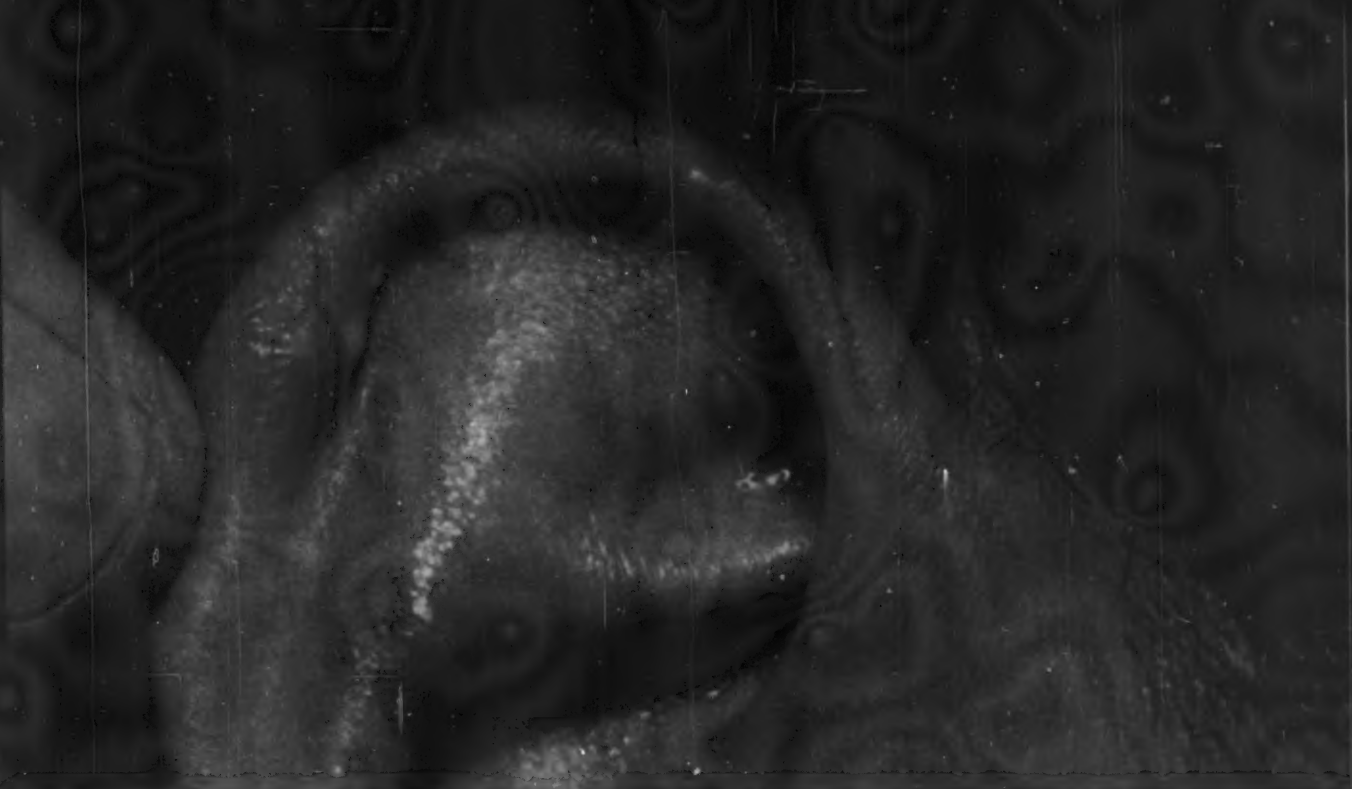
DOSAGE: average adult, 1 capsule four times daily.

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CANDIDATES FOR TAX-LOSS SELLING

Following N. Y. S. E. stocks are down considerably from 1960 highs.

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|-------------------------|------------------------|----------------------|-----------------------|
| Acme Steel | Chicago Yellow Cab | Hupp Corp. | Pitts. & West Va. |
| Adams-Millis | Chrysler Corp. | | Pittston Co. |
| Admiral Corp. | Colorado Fuel & Iron | Illinois Central | |
| Aeroquip Corp. | Comptometer Corp. | Intl. Paper | Rayonier Inc. |
| Air Control Prod. | Cooper-Bessemer | I-T-E Circuit | Reading Co. |
| A. J. Industries | Cooper Tire & R. | | Reynolds Metals |
| Alco Products | Copper Range | Jefferson Lake Sul. | Rheem Mfg. |
| Allegheny Lud. Steel | Copperweld Steel | Joy Mfg. | Robertshaw-Fulton |
| Allis-Chalmers | Crane Co. | | Royal McBee |
| Alum. Co. of Amer. | Crucible Steel | Kaiser Alum. | |
| Amer. Bosch Arma | Cudahy Packing | Kelsey Hayes | St. Regis Paper |
| Amer. Cable & Radio | Curtiss-Wright | Kroehler Mfg. | Schenley Ind. |
| American Enka | | | Schick Inc. |
| Amer. Hardware | Dayco Corp. | Lehigh Vy. R.R. | Scovill Mfg. |
| Amer. Mach. & Metals | Daystrom, Inc. | Lukens Steel | Sharon Steel |
| Amer. Metal Prods. | Del., Lack. & West. | | Spalding (A.G.) |
| Ampex Corp. | Detroit Steel | Mack Trucks | Standard Kollsman |
| Anaconda Co. | Diners' Club | Magma Copper | Stanley Warner |
| Anaconda Wire & C. | Disney (Walt) Prod. | Marquardt Corp. | Stanray Corp. |
| Arnold Constable | Duplan Corp. | McDermott (J. Ray) | Studebaker-Packard |
| Arvin Industries | | Merritt-Chapman | Sundstrand Corp. |
| Atlas Corp. | East. Stainless Steel | Minerals & Chem. | |
| Automatic Canteen | Eaton Mfg. | Minn. St. P.&S.S.M. | Texas & Pacific |
| | Elec. Storage Battery | Mohasco Industries | Thiokol Chemical |
| Babbitt (B.T.) | Emerson Radio | Monsanto Chem. | Trans World Airlines |
| Baltimore & Ohio | Erie R. R. | Montgomery Ward | Transitron Elec. |
| Beaunit Mills | Evans Products | Morrell (John) | |
| Bigelow-Sanford | | Motor Wheel | United Fruit |
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| Bridgeport Brass | Federal-Mogul-Bower | | U.S. Freight |
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| Budd Co. | Firth Carpet | Natl. Airlines | Universal-Cyclops |
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| | Foote Mineral | Natl. Sugar | |
| Callahan Mining | Foster Wheeler | Natl. Theatres | Vanadium Corp. |
| Capital Airlines | Fruehauf Trailer | N.Y. Central | Vertientes-Cam. Sugar |
| Carter Products | | N.Y., N.H. & Hart. | Vulcan Materials |
| Case (J.I.) | General Bronze | N.Y. Shipbuilding | |
| Celotex Corp. | General Controls | Northern Airlines | Wagner Electric |
| Chadbourne Gotham | Gen. Refractories | | Walworth Co. |
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THE FIRST MEDICATION FOR SIMULTANEOUS, OVER-ALL
MANAGEMENT OF CHRONIC GOUT AND GOUTY ARTHRITIS
NEW

Triurate®

combines 3 superior agents in 1 tablet for more comprehensive treatment:

FLEXIN® Zoxazolamine†, 100 mg.: the most potent uricosuric agent available¹⁻³—yet exhibits minimal side effects.⁴ Promotes maximum excretion of urates...facilitates resorption of tophi and prevents formation of new deposits. Relieves chronic joint pain and helps restore mobility.

COLCHICINE, 0.5 mg.: the time-tested specific for gout—most effective in preventing acute attacks.^{1,5,6}

TYLENOL® Acetaminophen, 300 mg.: the effective nonirritating analgesic⁷ which relieves chronic aches and pains without interfering with uricosuric action.^{8,9}

Average Dose: One tablet three times a day after meals.

Supplied: Scored, beige tablets, imprinted McNEIL, bottles of 50. Literature on method of administration and dosage is available upon request.

References:

- (1) Boland, E. W.: World-Wide Abstracts 3:11, 1960.
- (2) Talbott, J. H.: Arth. & Rheumat. 2:182, 1959.
- (3) Burns, J. J.; Yü, T. F.; Berger, L., and Gutman, A. B.: Am. J. Med. 25:401, 1958.
- (4) Kolodny, A. L.: J. Chron. Dis. 11:64, 1960.
- (5) Beckman, H.: Pharmacology in Clinical Practice, Philadelphia, Saunders, 1952, pp. 515-516.
- (6) Talbott, J. H.: J. Bone & Joint Surg. 40-A:994, 1958.
- (7) Batterman, R. C., and Grossman, A.: J.A.M.A. 159:1619, 1955.
- (8) Connor, T. B.; Carey, T. N.; Davis, T., and Lovice, H.: J. Clin. Invest. 38:997, 1959.
- (9) Reed, E. B.: Unpublished data.

†U.S. Patent No. 2,890,985

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Worthless Securities do not have to be sold to establish a capital loss, but you get no allowance until the securities are fully worthless and only in the year in which they became so. The year involved usually is not known until the Treasury completes its study of the facts. That may take a long time and may deprive you of some losses not claimed. In doubtful cases, therefore, it is advisable to make public sale of almost worthless securities if you have gains against which the losses can be offset.

Dividend Arrears—If you hold a preferred stock on which you have a long-term profit and on which dividend arrears are about to be paid, sell the stock just prior to the record date. Usually the stock will decline by the amount of the dividend payment when it goes ex-dividend. Repurchase after the record date if you want to reinstate your investment. As long-term profit, only 50% of the dividend is taxable. As dividend income, it is 100% taxable. The same is true of reorganization bonds that are about to pay off back interest, provided the bonds were traded "flat."

Exchanges—When you own stock for which you are about to receive cash, plus new securities, sell before the exchange date if you have a gain. Otherwise, you may have some ordinary income instead of capital gains. To reinstate your investment buy the new securities; do not repurchase the old stock.

Wash Sales—You cannot deduct a loss sustained from the sale of stock or securities if, within a period beginning 30 days before and ending 30 days after the sale, you reacquired by purchase (or entered into a contract to acquire) substantially identical property. That

is termed a "wash sale." The ending of your tax year during this restricted 61-day period does not prevent the denial of your deduction.

This prohibition does not apply: (1) If you are an individual sufficiently active in security transactions so that it can be called your "trade or business," even though you may have other businesses; (2) if you are doing business as a dealer in stocks or other securities; (3) to transactions resulting in a gain; and (4) to acquisitions by gift, inheritance, or a tax-free exchange.

You can effectively avoid the wash-sale rule by buying back other securities in the same industry or issues possessing similar characteristics. For example, if you sell Continental Can buy American Can, or vice versa. If you want to continue your position and yet establish a loss, you can buy an equivalent number of shares, hold the double amount for 31 days, and then sell the original holding.

Contributions—The cost of contributions can be cut by giving securities that have appreciated in value. You are allowed a deduction on the basis of current value, and you avoid payment of the capital gains tax on appreciation over the original cost.

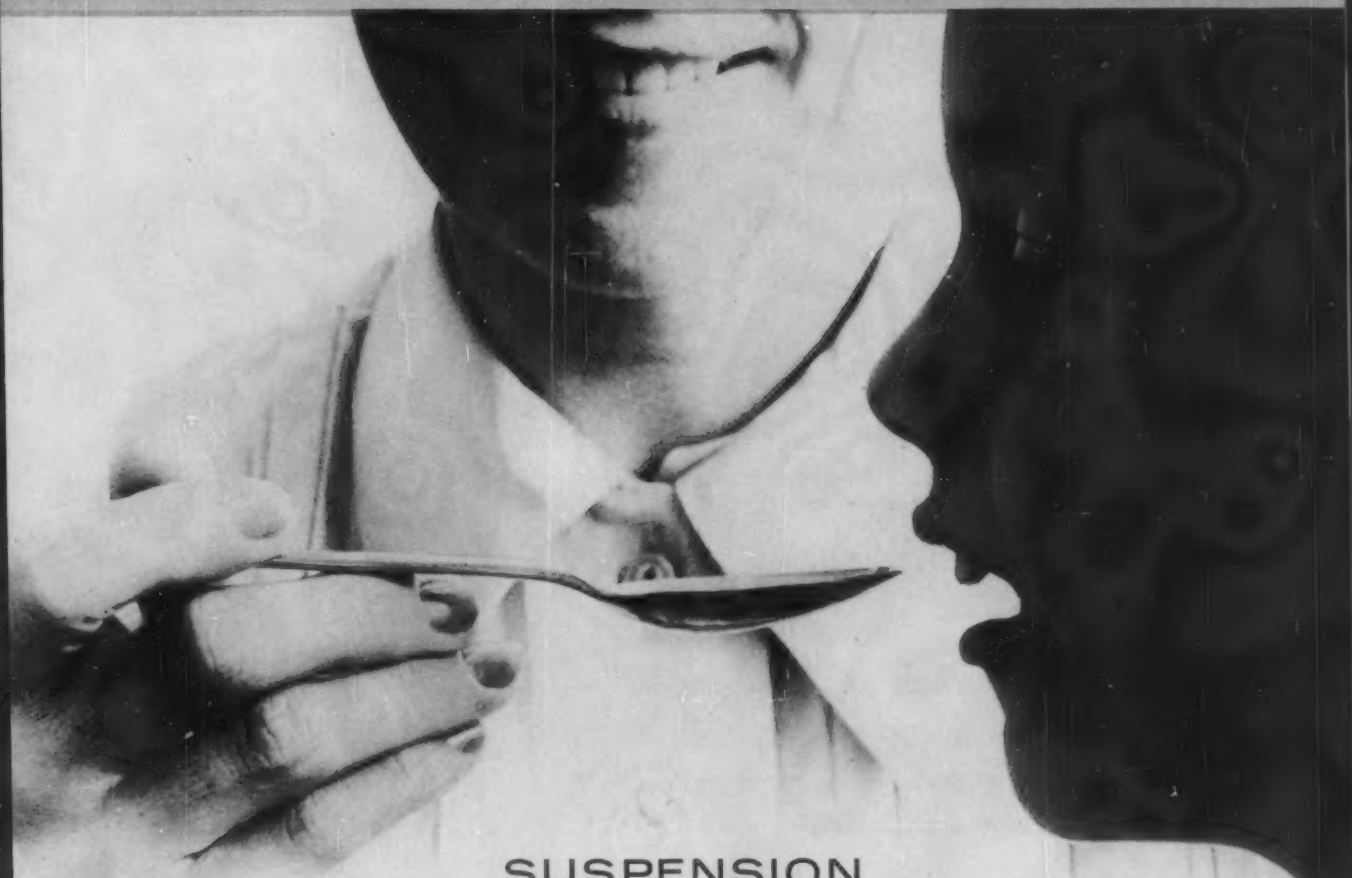
Investment Companies—Beginning in 1957, regulated investment companies have been allowed to retain realized profits and pay a 25% tax for the account of stockholders. The latter may include as long-term capital gains the amount of undistributed long-term capital gains designated by the companies and receive a tax credit of 25% of the amount so included. Moreover, they are allowed to write up the cost of their shares by 75% of the undistributed profits.

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Corn Products is not only the world's largest corn refiner, but, since its acquisition of Best Foods in 1958, also has developed into the second largest food processor. Some 500 of the company's industrial products have such

broad markets as the brewing, food, paper, pharmaceutical and textile industries. It also markets more than 30 packaged consumer products. Efforts are being intensified to raise the proportion of such branded grocery items,



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BICILLIN[®]

Benzathine Penicillin G, Wyeth

a pediatric penicillin

good taste

reliable absorption and effect

infrequent dosage requirements

Cherry flavor—300,000 units per 5 cc. teaspoonful, bottles of 2 fl. oz.
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Although infrequent, adverse reactions to many modern drugs may occur. For information on limitations, administration, and prescribing of BICILLIN, see descriptive literature or current Direction Circular.

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A Century of
Service to Medicine



High Degree of Absorption of DARCIL Promises Consistent Effectiveness

Numerous investigators have shown that the absorption of oral penicillin varies not only from subject to subject, but also in the same subject at different times. To provide a high degree of therapeutic assurance, therefore, requires a penicillin that is on the average well absorbed. High absorption, of course, implies high serum concentrations which, in turn, means an increased likelihood that tissues will be supplied with adequate penicillin.

The excellent absorption of phenethicillin potassium (DARCIL) has been demonstrated by studies of urinary excretion rates and serum concentrations.

Excellent Absorption Indicated by Urinary Excretion Studies. Knudsen and Rolinson,¹ in a study of 9 fasting subjects, reported that a mean of 60% of the dose of phenethicillin potassium was excreted in the urine within 6 hours after ingestion of the drug. Cronk and associates² found a lesser, although still high, rate: 24 to 35% of a given dose of phenethicillin potassium was excreted in the first 6 hours; almost three-quarters of this percentage was excreted in the first 2 hours alone. In comparing the urinary excretion rates of phenethicillin potassium with that of potassium penicillin V, an older oral penicillin, Morigi and

associates³ obtained the following data from a crossover study:

Average Urine Concentrations Following a Single Oral Dose of 250 mg. Phenethicillin Potassium and Potassium Penicillin V

| | 0-6 Hrs. | 6-12 Hrs. | 12-24 Hrs. |
|--------------------------|----------|-----------|------------|
| phenethicillin potassium | 30.9% | 0.4% | 0% |
| potassium penicillin V | 18.2% | 0.2% | 0% |

The urines of 10 healthy subjects were collected at 6-hour intervals following a dose given one hour before meals. As can be seen, the excretory rate of phenethicillin potassium is almost twice that of potassium penicillin V.

Excellent Absorption Indicated by Prompt, High Peak Serum Levels. Blood level studies also demonstrate the excellent absorption of phenethicillin potassium. In studies employing single oral doses of 250 mg. of phenethicillin potassium, Morigi and associates³ determined that peak serum levels of the antibiotic were attained within an hour after ingestion; therapeutic levels

a new synthetic
high-performance oral penicillin...

DARCIL^{*}

Penicillin-152 Potassium
phenethicillin potassium, Wyeth



- excellent absorption
- high peak serum levels
- extensive antibacterial activity
- lethal action to organisms susceptible to oral penicillin and, *in vitro*, to certain *Staph. aureus* resistant to natural penicillins.

4

5

6

were maintained for approximately 4 hours. Knudsen and Rolinson,¹ among others, have also demonstrated that phenethicillin potassium produces unusually high blood levels.

Serum Levels Directly Reflect Dose Levels. Cronk and associates² performed an interesting experiment that emphasizes the excellent absorption of phenethicillin potassium. Phenethicillin potassium was given to healthy adults in progressively increasing doses. The resultant serum levels were directly proportional to the doses given.

**Average Serum Concentration
½ Hr. after Administration**

| Dose (Mg.) | Mcg./Ml. | Units/Ml. |
|------------|----------|-----------|
| 134 | 2.72 | 4.35 |
| 268 | 4.28 | 6.85 |
| 536 | 8.15 | 13.0 |
| 804 | 12.3 | 19.7 |
| 1072 | 19.1 | 30.6 |
| 2144 | 39.6 | 63.4 |

Therefore, when treating a patient with a severe infection, the physician may, by doubling the dose, produce serum concentra-

tions that should be sufficiently great to affect less susceptible pathogens.

References: 1. Knudsen, E.T., and Rolinson, G.N.: *Lancet* 2:1105 (Dec. 19) 1959. 2. Cronk, G.A., Naumann, D.E., Albright, H., and Wheatley, W.B.: *Antibiotics Ann.*, 1959-1960, pp. 133-145. 3. Morigi, E.M.E., Wheatley, W.B., and Albright, H.: *Ibid*, pp. 127-132.

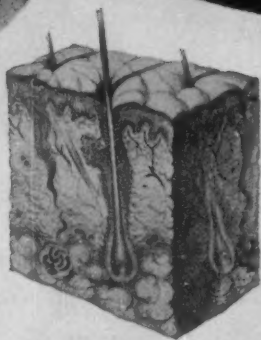
SUPPLIED: DARCIL Tablets (peach colored, scored)—250 mg. (400,000 units), 125 mg. (200,000 units) phenethicillin potassium, bottles of 36 and 100. DARCIL for Oral Solution—125 mg. (200,000 units) phenethicillin potassium per 5 cc. teaspoonful, bottle of powder to be reconstituted to 60 cc.

Although infrequent, adverse reactions to many modern drugs may occur. For further information on limitations, administration and prescribing of DARCIL, see descriptive literature or current direction circular. Wyeth Laboratories, Phila. 1, Pa.



^{*}Trademark

A Century of Service to Medicine



an effective narrow spectrum antibiotic . . .

in skin and soft tissue infections

. . . including many caused by staphylococci

CYCLAMYCIN[®]

Triacetyloleandomycin, Wyeth

Reliable oral antibiotic for the treatment of infections caused by most gram-positive organisms including many staphylococci resistant to other antibiotics.

Narrow spectrum of CYCLAMYCIN reduces risk of diarrhea and gastrointestinal super-infections arising from many gram-negative organisms.

In capsules or pleasant-tasting suspension, not affected by gastric acid, and well-tolerated even by some patients reacting adversely to other antibiotics.

SUPPLIED: Oral suspension, 125 mg. per 5 cc. teaspoonful, bottles of 2 fl. oz. Capsules, 125 mg. and 250 mg. vials of 36.

Although infrequent, adverse reactions to many modern drugs may occur. For further information on limitations, administration and prescribing of CYCLAMYCIN, see descriptive literature or current Direction Circular.

Wyeth Laboratories Philadelphia 1, Pa.



A Century of Service to Medicine[®]

STATISTICAL BACKGROUND

| YEAR ENDED DEC. 31 | *NET SALES | % OPER. INC. OF SALES | *NET INC. | COMMON SHARE (\$) DATE EARNINGS DIVS. PAID PRICE RANGE | | |
|--------------------------|---------------|-----------------------------|--------------|--------------------------------------------------------------|------|---------|
| 1960 | — | — | — | E3.50 | 2.10 | 67½-46½ |
| 1959 | 676.4 | 13.2 | 33.17 | 3.04 | 2.00 | 59¾-50¼ |
| 1958 | 650.0 | 13.4 | 33.75 | 3.00 | 1.75 | 55¾-33½ |
| 1957 | 449.3 | 11.6 | 29.00 | 2.55 | 1.50 | 34½-28 |
| 1956 | 304.2 | 11.5 | 21.07 | 2.36 | 1.50 | 32¾-27½ |
| 1955 | 290.2 | 11.3 | 20.49 | 2.29 | 1.33 | 30¾-26 |
| 1954 | 285.2 | 12.2 | 16.25 | 1.80 | 1.28 | 30½-23¾ |

* In millions of dollars. ¹Adj. for 3-for-1 split in 1955. E—Estimated.

Capitalization: Long-term debt, \$45,328,037; minority interest, \$4,425,789; common stock, 10,917,586 shares (\$1 par).

which currently account for 42% of total sales and provide wider profit margins than industrial and bulk products. Increased research and development costs are being directed toward new products, and advertising outlays are being raised.

Foreign business, which provided 32% of last year's net income, continues to show faster growth in sales and profits than domestic activities, and it is expected to maintain, if not accelerate, this more rapid pace. Growth prospects for consumer products in overseas markets, particularly Western Europe and Latin America, are favored by a more rapidly rising standard of living, and the outlook for other products is brightened by the increased tempo of industrialization. About half of this year's

capital outlays of more than \$25 million are for overseas facilities, including grinding mills in Colombia and Uruguay and a sugar packaging plant at Durban, South Africa.

Earnings for 1960 are estimated at a new peak of \$3.50 a share, up from \$3.04 in 1959. Such earnings provide good support for dividends of \$0.55 quarterly, raised from \$0.50 with the July payment. With another gain in earnings in prospect for 1961, a further increase in the dividend is likely then.

Considering the underlying stability of the company's business and its growth potentials, especially overseas, this sound stock, if bought at about 67 to yield 3.3%, is an attractive long-term commitment, notwithstanding its recent price advance.

BUYING OPPORTUNITY IN BONDS

Heavy new issue calendars likely to bring generous yields—Price uptrend expected to resume later

Bond prices have been marking time since early August, after scoring major gains in the first seven months of the year. The Treasury's hesitation.

This operation has been successfully concluded, but the build-up in both corporate and municipal calendars has kept the bond market on the defensive.

This calendar congestion is expected to reach a peak shortly, and bring bargain prices for bond investors. Top-grade corporate new issues are currently yielding around 4.65%, while prime tax exempts return up to 3.90%.

Higher returns are available in issues of lower quality.

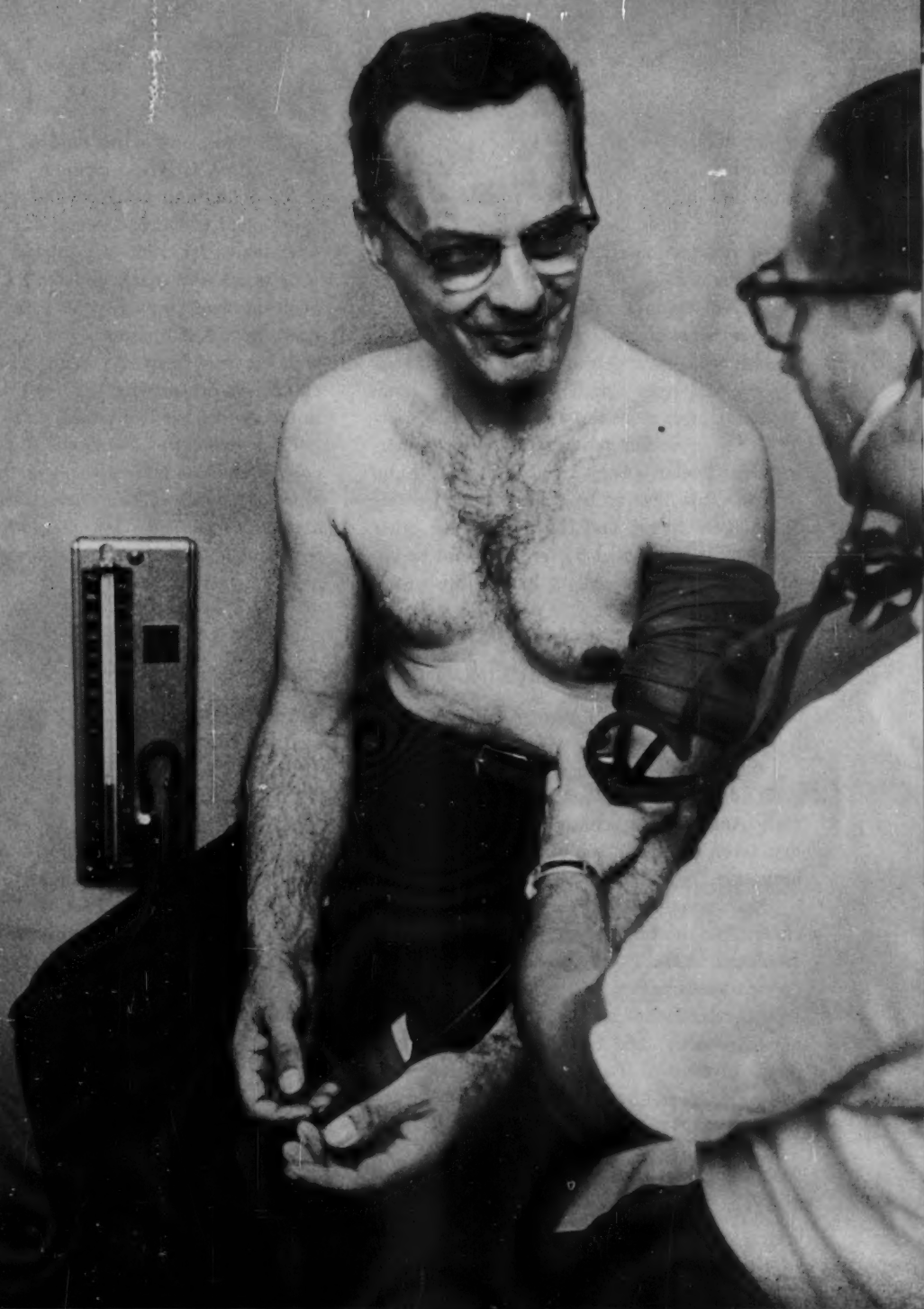
Government issues have less current attraction. Long-term Treasuries yield less than 4%, while returns on Federal agency issues (considered virtually as safe as Governments) yield up to 4.20%. In comparison, Series E and H Savings Bonds yield 3¾% when held to maturity and entail no risk of price fluctuations.

The information set forth herein has been obtained from sources believed to be reliable, but its accuracy and completeness are not guaranteed.

this hypertensive patient prefers Singoserp

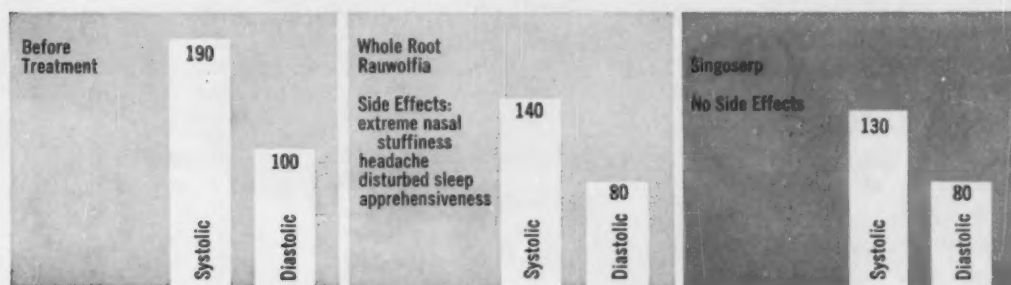
Patient's comment: "The other drug [whole root rauwolfia] made me feel lazy. I just didn't feel in the mood to make my calls. My nose used to get stuffed up, too. This new pill [Singoserp] doesn't give me any trouble at all."

Photo used with patient's permission.



...and so does his physician

Clinician's report: J. M., a salesman, had a 16-year history of hypertension and was rejected by the U.S. Army because of high blood pressure. When treated with whole root rauwolfia, patient had satisfactory blood pressure response but could not tolerate side effects. Singoserp, in a dose of 0.5 mg. daily, not only reduced patient's blood pressure still further, but did not produce any side effects.



Many hypertensive patients and their physicians prefer Singoserp® because it usually lowers blood pressure without rauwolfia side effects

SUPPLIED: Singoserp Tablets, 1 mg. (white, scored). Also available: Singoserp®-Esidrix® Tablets #2 (white), each containing 1 mg. Singoserp and 25 mg. Esidrix; Singoserp®-Esidrix® Tablets #1 (white), each containing 0.5 mg. Singoserp and 25 mg. Esidrix. Complete information sent on request.

Singoserp® (syrosingopine CIBA)
Singoserp®-Esidrix® (syrosingopine and hydrochlorothiazide CIBA)

CIBA
SUMMIT, NEW JERSEY

8/58409K

RECOMMENDED BONDS

| | S. & P. RATING | *CALL PRICE | APX. PRICE ¹ | YIELD TO MATURITY |
|-------------------------------------------------------|----------------|--------------|-------------------------|-------------------|
| FEDERAL AGENCIES | | | | |
| F.N.M.A. 4½s, 9-10-70 | — | — | 99.10 | 4.21% |
| F.N.M.A. 4½s, 8-10-71 | — | — | 99.12 | 4.20 |
| †TAX-EXEMPT BONDS | | | | |
| California (State) 4s, 9-1-86 | A1+ | 100('81) | 101½ | 3.91 |
| Eugene, Ore. (Elec. Rev.) 4s, 8-1-2001 | A1 | 103('71) | 100 | 4.00 |
| Oroville-Wyandotte Irrig. Dist., Calif. 4¼s, 7-1-2010 | A1 | 100('85) | 104¼ | 4.05 |
| Pa. State Pub. Sch. Auth. 4.15s, 11-1-94 | A1 | 103('70) | 100 | 4.15 |
| Louisiana (Hwy.) 3.70s, 10-15-79 | A | 102('69) | 100 | 3.70 |
| Detroit S.D., Michigan 4s, 5-1-84 | A | 103('74) | 101½ | 3.90 |
| Elizabeth River Tunnel, Va. 4½s, 2-1-2000 | A | 105('70) | 103 | 4.35 |
| New York City Housing Auth. 4s, 1-1-2005 | A | 104('75) | 100 | 4.00 |
| Puerto Rico Aqueduct & Swr. 4.20s, 7-1-87 | A | 104('67) | 100 | 4.20 |
| N.Y. State Pwr. Auth. 4½s, 1-1-2006 | A | 103('70) | 102 | 4.02 |
| U. S. GOVERNMENT ISSUES | | | | |
| Treasury 4¼s, 5-15-75/85 | — | — | 103.22 | 3.91% |
| Treasury 3½s, 2-15-90 | — | — | 92.20 | 3.92 |
| Treasury 3½s, 11-15-98 | — | — | 91.6 | 3.95 |
| CORPORATE BONDS | | | | |
| Amer. Tel. & Tel. 2¾s, 1980 ² | A1+ | 101.50 | 92 | 4.15% |
| Michigan Bell Tel. 4¾s, 1992 | A1+ | 110 | 101 | 4.72 |
| Phila. Electric 2¾s, 1967 ² | A1+ | 101.50 | 92 | 4.14 |
| Southwest, Bell Tel. 4¾s, 1992 | A1+ | 110 | 101 | 4.72 |
| Standard Oil (N.J.) 2¾s, 1971 ² | A1+ | 100½ | 86 | 4.05 |
| Con. Edison 2½s, 1977 ² | A1 | 102.24 | 81 | 4.25 |
| Northern States Pwr. 2¾s, 1975 ² | A1 | 101½ | 83 | 4.27 |
| Public Serv. Elec. & Gas 4¾s, 1990 | A1 | 107.10 | 100 | 4.75 |
| Standard Oil (Ind.) 4½s, 1983 ² | A1 | 103¼ ('63) | 101 | 4.43 |
| Virginia Elec. Pwr. 3s, 1978 ² | A1 | 102.35 | 84 | 4.29 |
| Youngstown Sheet & T. 4½s, 1990 | A1 | 101¾ ('65) | 98 | 4.60 |
| General Motors Accep. 2¾s, 1964 ² | A | 100¼ | 96 | 3.90 |
| Household Finance 4¾s, 1981 | A | 102.75 ('65) | 100 | 4.87 |
| Melville Shoe 4¾s, 1980 | A | 103½ ('65) | 102 | 4.69 |

*Figures in parentheses represent first year in which issue becomes callable. †If these precise coupons and maturities no longer are available, other maturities of the same issue at comparable yields are recommended. N.C.—Non-callable. ¹Because of the time-lag created by the mechanics of magazine publishing, investors should consult daily papers for latest prices. ²Listed on New York Stock Exchange.

The circumstances that caused bond yields to decline sharply during the early months of 1960 remain basically unchanged. Evidence of a really satisfactory upturn in business is still lacking. The Federal Reserve has already taken a number of steps to expand the money supply and to encourage economic activity through lower interest rates. The clouded business outlook makes further moves in this direction appear likely.

State and local capital demands remain strong. Corporations may take advantage of any decline in bond rates to step up long-term

borrowing, even if capital spending starts downward. The pace of new non-Government issues should be fairly well sustained, but is likely to tail off from the current high level. Treasury outstanding debt is due to decline seasonally between mid-October and next June 30.

Although lower than in early 1960, bond yields remain attractive relative to those of common stocks. The heavy flow of new issues should present investors with favorable buying opportunities. A renewed uptrend in bond prices is likely once the current calendar congestion is cleaned up.

Your difficult rheumatic patient...

on the job again

through effective relief and rehabilitation

For the patient who does not require steroids

PABALATE®

Reciprocally acting nonsteroid antirheumatics... more effective than salicylate alone.

In each enteric-coated tablet:

Sodium salicylate U.S.P.0.3 Gm. (5 gr.)
Sodium
para-aminobenzoate0.3 Gm. (5 gr.)
Ascorbic acid50.0 mg.

or for the patient
who should avoid sodium

PABALATE® - Sodium Free
Pabalate, with sodium salts replaced by potassium salts.

In each enteric-coated tablet:

Potassium salicylate0.3 Gm. (5 gr.)
Potassium
para-aminobenzoate0.3 Gm. (5 gr.)
Ascorbic acid50.0 mg.

For the patient
who requires steroids

PABALATE®-HC

(PABALATE WITH HYDROCORTISONE)

Comprehensive synergistic combination of steroid and nonsteroid antirheumatics... full hormone effects on low hormone dosage... satisfactory remission of rheumatic symptoms in 85% of patients tested.

In each enteric-coated tablet:

Hydrocortisone (alcohol) 2.5 mg.
Potassium salicylate 0.3 Gm.
Potassium para-aminobenzoate.. 0.3 Gm.
Ascorbic acid50.0 mg.

PABALATE®  **PABALATE®-HC**

For steroid or non-steroid therapy: SAFE DEPENDABLE ECONOMICAL

A. H. ROBINS CO., INC., RICHMOND 20, VIRGINIA • Ethical Pharmaceuticals of Merit since 1878

**INVESTMENT
REPORTS
CURRENTLY
AVAILABLE**

Material concerning the following industries and corporations is available on request from the firms indicated. You can do us a favor if you mention Medical Times as the source of your information.

| REPORT ON | PAGES | AVAILABLE FROM | NEW YORK ADDRESS |
|--------------------------------------|-------|---------------------------------|------------------------------------|
| Amerada Petroleum Corporation | 5 | Smith, Barney & Co. | 20 Broad Street |
| American Stores | 3 | F. P. Ristine & Co. | 15 Broad Street |
| Atchison, Topeka and Santa Fe | 4 | Francis I. duPont & Co. | 1 Wall Street |
| Chance Vought Aircraft, Inc. | 21 | Stearns & Co. | 72 Wall Street |
| Cluett, Peabody & Co., Inc. | 4 | Robert Garrett & Sons | 115 Broadway |
| Columbia Broadcasting System | 3 | Walston & Co., Inc. | 74 Wall Street |
| Consolidated Edison Co. of N. Y. | 4 | Francis I. duPont & Co. | 1 Wall Street |
| Construction | 32 | Dominick & Dominick | 14 Wall Street |
| Corn Products Company | 4 | Laird, Bissell & Meeds | 120 Broadway |
| Dome Mines Limited | 4 | Francis I. duPont & Co. | 1 Wall Street |
| Electrical and Musical Industries | 3 | Abraham & Co. | 120 Broadway |
| First National Stores, Inc. | 4 | Francis I. duPont & Co. | 1 Wall Street |
| Food Fair Properties, Inc. | 4 | Charles A. Taggart & Co. | 1516 Locust Street, Phila., Pa. |
| Gardner-Denver Company | 4 | A. C. Allyn & Co. | 44 Wall Street |
| General Public Utilities Corporation | 4 | Parrish & Co. | 40 Wall Street |
| Gerber Products Company | 7 | A. G. Becker & Co., Inc. | 60 Broadway |
| Gillette Company | 4 | Paine, Webber, Jackson & Curtis | 25 Broad Street |
| Grant, W. T., Company | 4 | Francis I. duPont & Co. | 1 Wall Street |
| Hammermill Paper Co. | 4 | Francis I. duPont & Co. | 1 Wall Street |
| Hammermill Paper Company | 6 | Goodbody & Co. | 2 Broadway |
| Holly Sugar Corporation | 4 | Auchincloss, Parker & Redpath | 2 Broadway |
| Hoover Ball & Bearing Co. | 7 | White Weld & Co. | 20 Broad Street |
| Korvette, E. J., Inc. | 4 | Eastman Dillon, Union Sec. | 15 Broadway |
| McGraw-Hill | 4 | Laidlaw & Co. | 25 Broad Street |
| Morrison-Knudsen Company, Inc. | 4 | DeWitt Conklin Organization | 120 Broadway |
| National Steel Corporation | 12 | L. F. Rothschild & Co. | 120 Broadway |
| Newberry, J. J., Company | 4 | Francis I. duPont & Co. | 1 Wall Street |
| Plough, Inc. | 4 | R. W. Pressprich & Co. | 48 Wall Street |
| Ranco Incorporated | 15 | D. M. S. Hegarty & Associates | 19 Rector Street |
| Row, Peterson & Company | 7 | Loewi & Co. | 42 Wall Street |
| Skelly Oil Company | 6 | Smith, Barney & Co. | 20 Broad Street |
| Southern California Edison Company | 4 | Smith, Barney & Co. | 20 Broad Street |
| Southern Railway | 7 | Goodbody & Co. | 2 Broadway |
| Sparton Corporation | 6 | DeWitt Conklin Organization | 120 Broadway |
| Standard Oil Co. (New Jersey) | 4 | Smith, Barney & Co. | 20 Broad Street |
| Tennessee Corporation | 4 | Sutro Bros. & Co. | 120 Broadway |
| Tennessee Gas Transmission Co. | 4 | Francis I. duPont & Co. | 1 Wall Street |
| United Aircraft Corporation | 4 | John H. Lewis & Co. | 63 Wall Street |
| United Shoe Machinery | 6 | Walston & Co. | 74 Wall Street |
| Universal Oil Products Co. | 9 | Smith, Barney & Co. | 20 Broad Street |
| Victoreen Instruments Company | 3 | Gude, Winmill & Co. | 1 Wall Street |
| Virginia Electric & Power Co. | 4 | Smith, Barney & Co. | 20 Broad Street |
| Washington Water Power Company | 4 | Smith, Barney & Co. | 20 Broad Street |
| Zenith Radio Corporation | 6 | Shields & Company | 44 Wall Street |

New
Hygroton® **Geigy**
brand of chlorthalidone
**longest in action...
smoothest in effect**

**in hypertension
and edema**

greater loss of sodium
lesser loss of potassium

A new antihypertensive-saluretic,
Hygroton, now enables still more effective
control of hypertension and edema.

more evenly sustained therapeutic response
Because it is more prolonged in action
than any other diuretic,¹ Hygroton affords
a smoother, more evenly sustained
response.

more nearly pure natriuretic effect
Hygroton produces only minimal
potassium loss . . . affords a better sodium-
potassium ratio than other saluretics.²

more liberal diet for the patient
As a rule, with Hygroton, restriction of
dietary salt is unnecessary.

more convenience and economy
For maintenance therapy three doses per
week suffice to manage the vast majority
of cases.²

in arterial hypertension
Sustained control without side reactions.

in edematous states
Copious diuresis without electrolyte
imbalance.

Hygroton®, brand of chlorthalidone: White,
single-scored tablets of 100 mg. in bottles of 100.

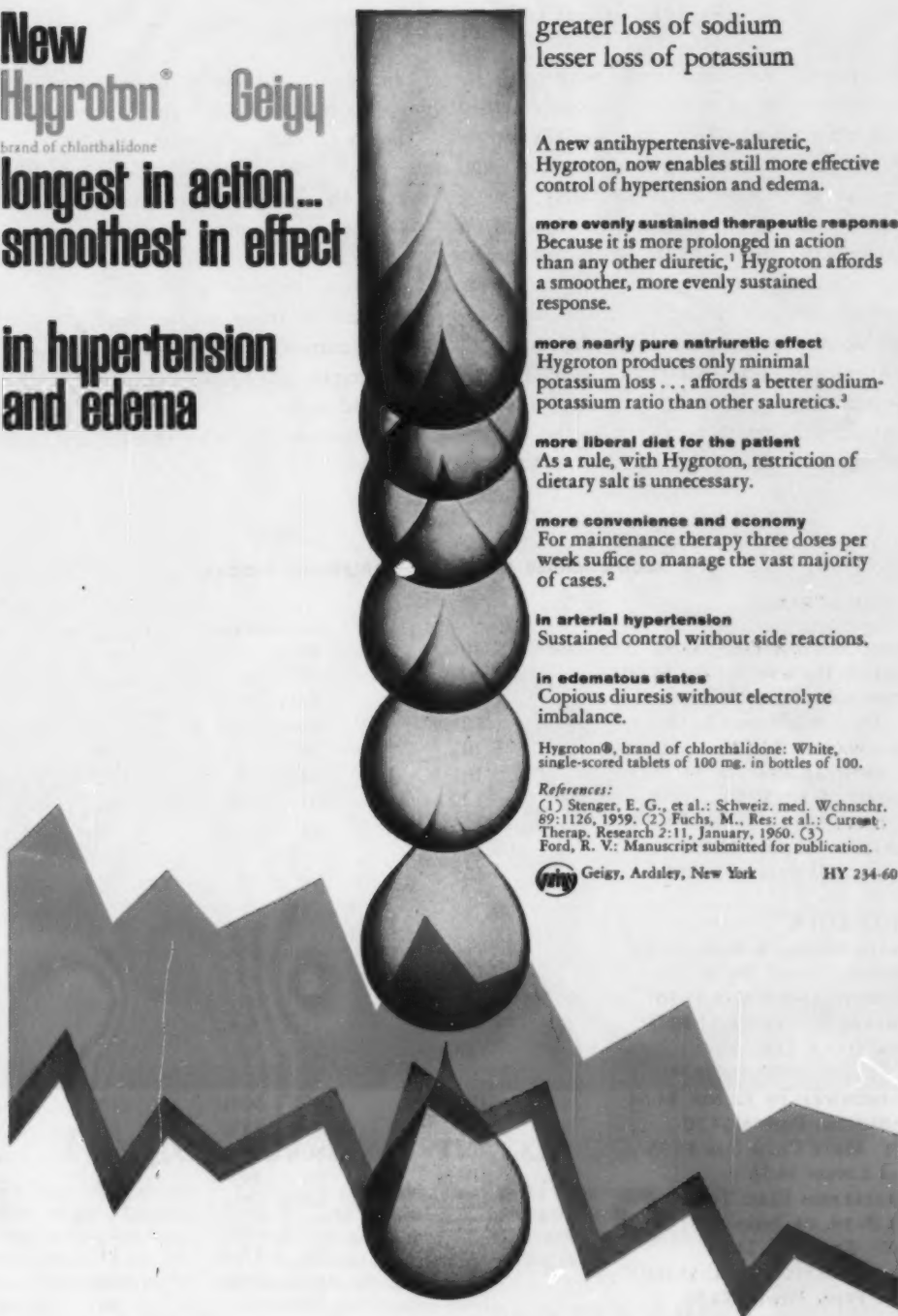
References:

(1) Stenger, E. G., et al.: Schweiz. med. Wchnschr.
89:1126, 1959. (2) Fuchs, M., Res: et al.: Current
Therap. Research 2:11, January, 1960. (3)
Ford, R. V.: Manuscript submitted for publication.



Geigy, Ardsley, New York

HY 234-60



PREFERRED STOCKS OFFER ATTRACTIVE YIELDS

High-grade issues returning at least one percent more than common stocks—Trend toward easier money should bolster market

High-grade preferred stocks have considerable investment merit under present unsettled market conditions. They are especially attractive to conservative long-term investors who are seeking a high degree of safety, plus a larger income return than can be obtained on the average common stock. They also can be used advantageously as a temporary haven for reserve funds until buying opportunities in common stocks become more clearly defined.

At present, preferred stocks yield at least one percentage point more than common stocks, a strong inducement in itself. As the accompanying chart shows, this relationship has pre-

vailed only since 1958. Prior thereto, common stocks offered much higher returns than either bonds or preferred stocks.

High-grade preferred stocks are influenced more by money market trends than they are by the factors governing common stocks, in this respect being comparable to bonds. As a consequence, market movements at times run counter to those for junior equities. While there currently is considerable uncertainty concerning the latter's immediate course, the trend toward easier credit should tend to strengthen the market for both bonds and preferred stocks.

RECOMMENDED HIGH-GRADE PREFERRED STOCKS

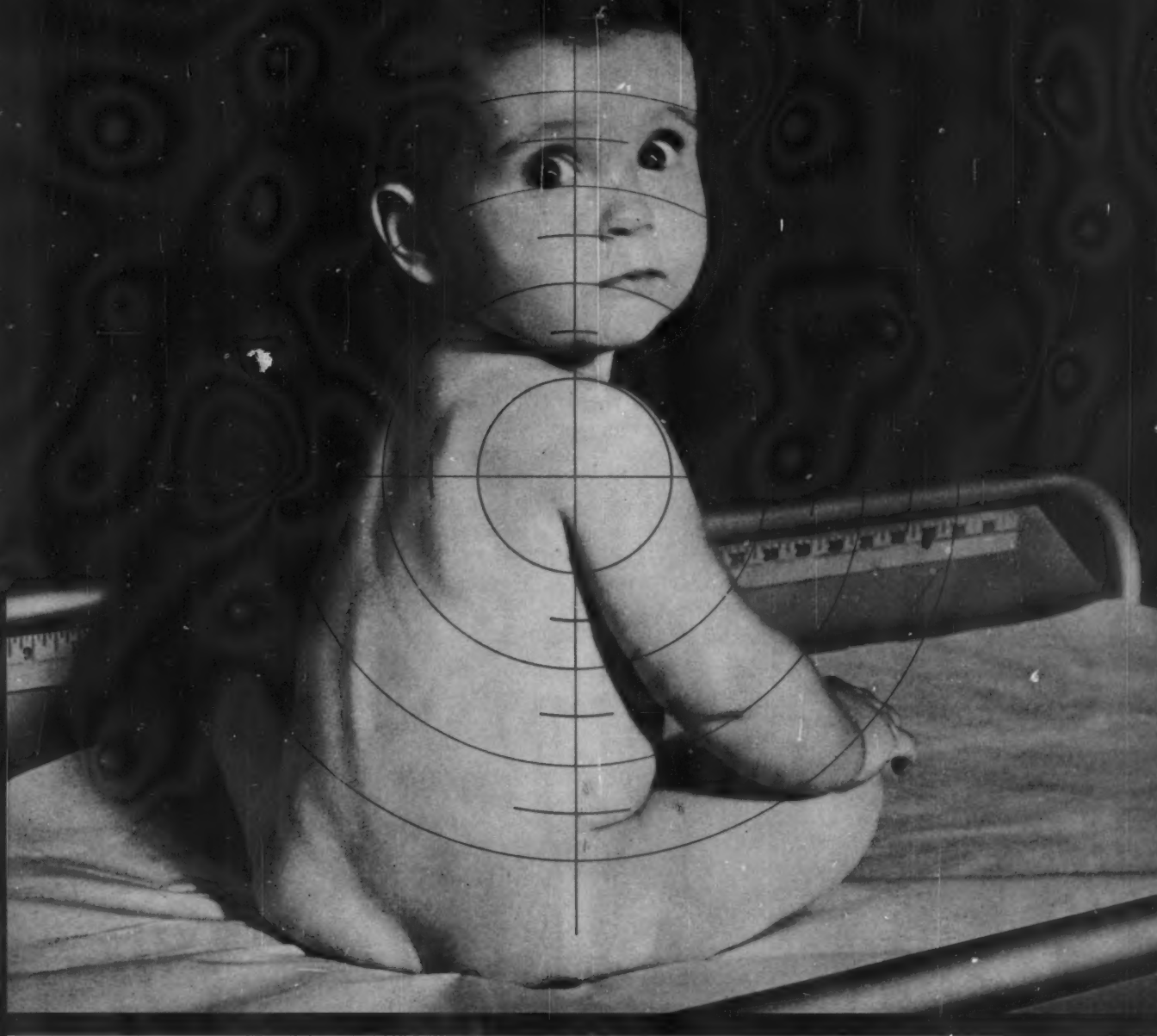
INDUSTRIALS

| | CALL PRICE | 1960 PRICE RANGE | *APPROX. PRICE | YIELD % |
|-----------------------------------|------------|------------------|----------------|---------|
| AMER. MACH. & FDRY. \$3.90 | 104 | 84 - 76¼ | 64 | 6.1 |
| ANCHOR HOCKING GLASS \$4.00 | 107 | 93½ - 85 | 93 | 4.3 |
| ARMSTRONG CORK \$3.75 | 102¾ | 83½ - 75 | 80 | 4.7 |
| ATLANTIC REFINING \$3.75B | 101½ | 80¼ - 74½ | 76 | 4.9 |
| BORG-WARNER \$3.50 | 103 | 79 - 77 | 79 | 4.4 |
| CATERPILLAR TRACTOR \$4.20 | 101½ | 94½ - 88 | 88 | 4.8 |
| DUPONT (E.I.) \$4.50 | 120 | 103 - 96¼ | 100 | 4.5 |
| GENERAL MILLS \$5 | 115 | 111 - 101½ | 107 | 4.7 |
| GENERAL MOTORS \$3.75 | 103 | 85¾ - 76½ | 104 | 3.6 |
| *SHERWIN-WILLIAMS \$4.00 | 105 | 93 - 89 | 110 | 3.6 |

UTILITIES

| | | | | |
|------------------------------------|--------|------------|-----|-----|
| BALTIMORE GAS & ELEC. \$4.50 | 110 | 98¾ - 90¼ | 93 | 4.8 |
| §BOSTON EDISON \$4.78 | 107.80 | 97 - 93 | 97 | 4.9 |
| BROOKLYN UNION GAS \$5.50 | 110 | 110 - 100 | 108 | 5.1 |
| CENTRAL ILL. LIGHT \$4.50 | 110 | 95¾ - 88¾ | 92 | 4.9 |
| CINN. GAS & ELECTRIC \$4 | 108 | 87¾ - 78½ | 84 | 4.8 |
| CLEVE. ELEC. ILLUM. \$4.50 | 107 | 99 - 90½ | 95 | 4.7 |
| COMMONWEALTH EDISON \$4.64 | 106½ | 101 - 90¾ | 107 | 4.3 |
| CONSUMERS POWER \$4.50 | 110 | 96¾ - 88¼ | 95 | 4.7 |
| N. Y. STATE EL. & GAS \$3.75 | 104 | 80¾ - 72½ | 76 | 4.9 |
| OHIO EDISON \$4.56 | 105¾ | 96 - 89 | 80 | 5.7 |
| PHILADELPHIA ELEC. \$4.40 | 112½ | 99¼ - 87¾ | 101 | 4.4 |
| PUB. SERV. OF INDIANA \$1.08 | 25¾ | 23½ - 20½ | 21 | 5.1 |
| UNION ELECTRIC \$4.50 | 110 | 96 - 87¼ | 81 | 5.6 |
| VIRGINIA ELEC. & PWR. \$5.00 | 112½ | 106½ - 99¾ | 105 | 4.8 |
| WEST PENN POWER \$4.50 | 110 | 98½ - 87 | 94 | 4.8 |

All Listed on New York Stock Exchange unless otherwise noted. *American Stock Exchange. §Over-the-counter. 'Redeemable for sinking fund at 100½. *Because of the time-lag created by the mechanics of magazine publishing, investors should consult daily papers for latest prices.



Target for Dermatoses

A baby's skin—without the protection of an adequate "acid mantle"—is an easy target for inflammation, infection, and stubborn chronic dermatoses.

COR-TAR-QUIN™ is for babies—and for any patient in whom low resistance, refractoriness to treatment, or risk of complications puts a premium on fast, dependable response.

Thoroughly established in dermatologic practice, COR-TAR-QUIN is one of the most sophisticated topical preparations available today . . . a unique combination of anti-inflammatory hydrocortisone, anti-infective diiodohydroxyquinoline, and keratolytic tar incorporated in the exclusive ACID MANTLE® vehicle that potentiates active ingredients and speeds heal-

ing by restoring and maintaining the protective mantle of acidity characteristic of healthy skin.

COR-TAR-QUIN™ CREME pH 5.0 LOTION

1% diiodohydroxyquinoline with ¼%, ½% or 1% micronized hydrocortisone alcohol and 2% liquor carbonis detergens in the exclusive ACID MANTLE® vehicle.



DOME CHEMICALS INC.
New York • Los Angeles



FIRE INSURANCE OUTLOOK GOOD

Hurricane losses fully reflected by market correction—Better results likely next year — Stocks have above-average appeal

Insurance losses resulting from Hurricane Donna have been estimated at \$135 million, which would be second only to the 1950 wind-storm losses of \$174 million and which would compare with hurricane losses of \$130 million and \$122 million by Carol and Hazel, both in 1954.

Many of the loss claims from the disaster were against companies with a large proportion of their business in Atlantic Coast states. The \$50-\$100 deductible clauses introduced to extended coverage policies some years ago, however, eliminated numerous small loss claims, which reached a sizable total in 1954. Sharply increased premium rates also have helped. In 1958 and 1959 extended coverage insurance produced excellent profits.

The Donna setback served as a reminder of the uncertainties in the insurance business. Prices of affected insurance company stocks dropped promptly, but much of the loss should be recovered as the market takes a longer-term view of the situation.

Premium volume has continued to increase at a gratifying rate of about 8% a year. With the aid of increased rates on important lines (especially auto insurance), expense and loss ratios have declined, and net underwriting results have regained a profitable status. The favorable trend is expected to continue, despite temporary blows such as that dealt by Hurricane Donna.

Combined loss and expense ratios of stock fire-casualty insurance companies, which declined from 103% in 1957 to 100% in 1958 and to 98% in 1959, may still continue downward for 1960, in view of the improvement achieved so far. Addition of the equity in grow-



TRIPLE-ACTION GERIATRIC TONIC

OFFSETS NUTRITIONAL DEFICIENCY
ENHANCES WELL-BEING
AIDS METABOLISM

NEW

1 small capsule every morning

GEVRESTIN®

Geriatric Vitamins-Minerals-Hormones-d-Amphetamine Lederle

Each capsule contains: Ethinyl Estradiol 0.01 mg. • Methyl Testosterone 2.5 mg. • d-Amphetamine Sulfate 2.5 mg. • Vitamin A (Acetate) 5,000 U.S.P. Units • Vitamin D 500 U.S.P. Units • Vitamin B₁₂ with AUTRINIC® Intrinsic Factor Concentrate 1/15 U.S.P. Unit (Oral) • Thiamine Mononitrate (B₁) 5 mg. • Riboflavin (B₂) 5 mg. • Niacinamide 15 mg. • Pyridoxine HCl (B₆) 0.5 mg. • Calcium Pantothenate 5 mg. • Choline Bitartrate 25 mg. • Inositol 25 mg. • Ascorbic Acid (C) as Calcium Ascorbate

50 mg. • L-Lysine Monohydrochloride 25 mg. • Vitamin E (Tocopherol Acid Succinate) 10 Int. Units • Rutin 12.5 mg. • Ferrous Fumarate (Elemental iron, 10 mg.) 30.4 mg. • Iodine (as KI) 0.1 mg. • Calcium (as CaHPO₄) 35 mg. • Phosphorus (as CaHPO₄) 27 mg. • Fluorine (as CaF₂) 0.1 mg. • Copper (as CuO) 1 mg. • Potassium (as K₂SO₄) 5 mg. • Manganese (as MnO₂) 1 mg. • Zinc (as ZnO) 0.5 mg. • Magnesium (MgO) 1 mg. • Boron (as Na₂B₄O₇·10H₂O) 0.1 mg. Bottles of 100, 1000.

LEDERLE LABORATORIES, a Division of AMERICAN CYANAMID COMPANY, Pearl River, New York

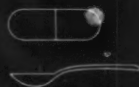


*to
encourage
colonic
peristalsis
without
whipping the
bowel.*

DORBANE



DORBANTYL



DORBANTYL FORTE



The active principle of Dorbane reaches the colon through the circulation. It acts directly and selectively upon the intrinsic plexus of the colon. The small bowel is not affected. Within 6 to 12 hours evacuation occurs without cramping or griping. Non-habituating. Each scored tablet of Dorbane contains 75 mg., and each teaspoonful of orange-flavored liquid contains 37.5 mg. of 1,8 dihydroxyanthraquinone. Suitable for patients of all ages.

Dorbantyl combines the colonic stimulant action of Dorbane (25 mg.) with the stool-softening effect of dioctyl sodium sulfosuccinate (50 mg.), an inert and safe surface-wetting agent, in each orange-and-black capsule or teaspoonful of orange-pineapple-flavored suspension.

Dorbantyl Forte offers double strength dosage of the Dorbantyl combination for greater convenience and economy for patients requiring extra potency. In orange-and-gray capsules only.



Northridge, California

GUIDE FOR INVESTORS

Based on recommendations of the Securities and Exchange Commissions in cooperation with the New York Stock Exchange, American Stock Exchange, National Association of Securities Dealers and others.

1. Think before buying, guard against all high pressure sales.
2. Beware of promises of quick spectacular price rises.
3. Be sure you understand the risk of loss as well as prospect of gain.
4. Get the facts—do not buy on tips or rumors.
5. Give at least as much thought when purchasing securities as you would when acquiring any valuable property.
6. Be skeptical of securities offered on the telephone from any firm or salesman you do not know.
7. Request the person offering securities over the phone to mail you written information about the corporation, its operations, net profit, management, financial position and future prospects.

ing unearned premium reserves should result in net underwriting profits for most companies.

Many companies have tax loss carryovers that will fully cover taxable income for some time. Meanwhile, net investment income, aided by the constant addition of new funds arising from increased premium volume, is still establishing new record highs. The gain in net investment income for 1959 was 10%, against 5% in 1958, and an average rise of 8% is estimated for 1960.

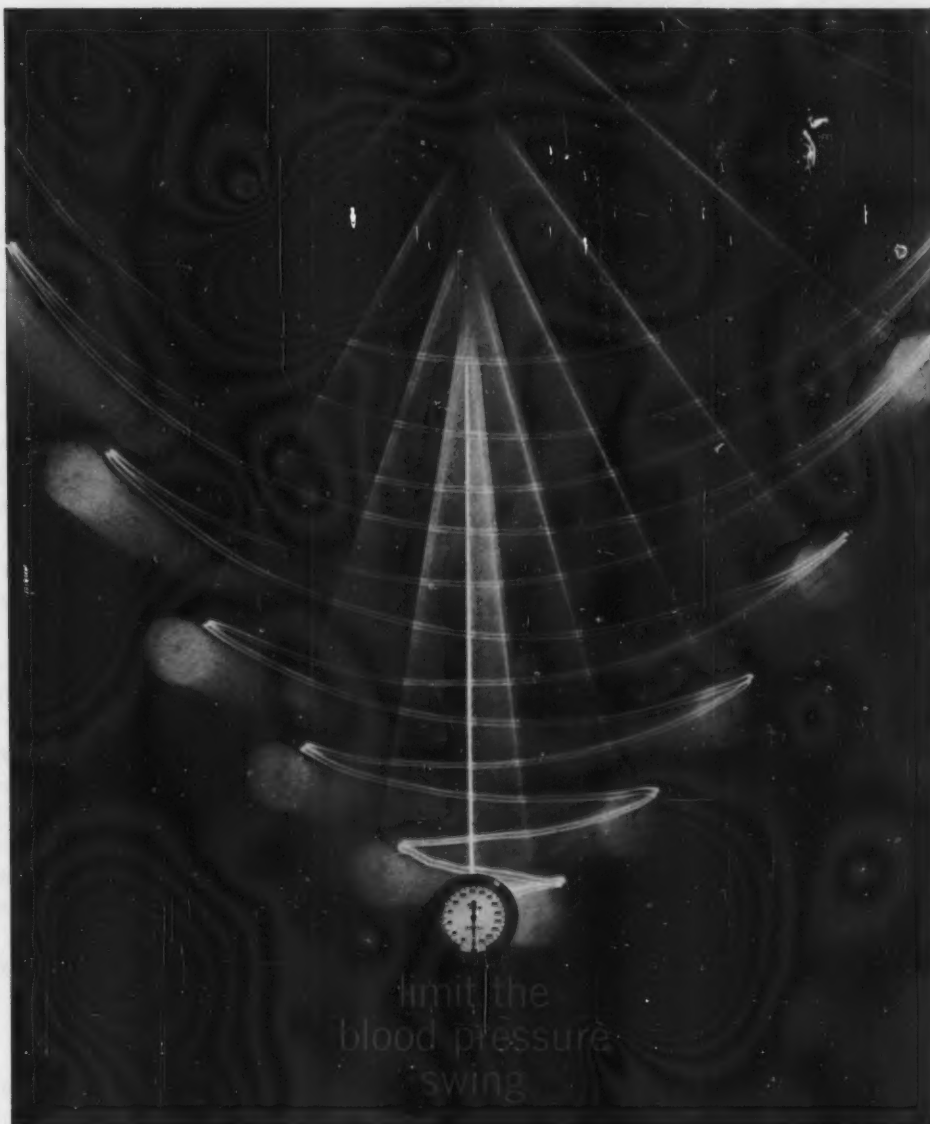
The combination of improved investment net, plus a small net underwriting profit this year, should enable the *average* company to report combined net earnings for 1960 in excess of those for 1959. Individual company comparisons, of course, will vary considerably.

The trend of dividend payments has been upward for more than a year, and additional scattered instances of dividend increases are likely.

While earnings and dividends are of primary importance, the market performance of fire-casualty insurance stocks is importantly affected by general market trends, reflecting (1) the large holdings of stocks in the companies' portfolios and (2) the effect of general market psychology on the price-earnings ratio. Nevertheless, the fire-casualty insurance stocks are likely to continue to perform *relatively* favorably.

Purchases of CONTINENTAL, GLENS FALLS, GREAT AMERICAN, and RELIANCE are justified whenever general market policy favors extension of commitments. HARTFORD FIRE and INSURANCE COMPANY OF NORTH AMERICA have relative appeal for conservative accounts seeking high-quality issues.

● **CONTINENTAL INSURANCE**—Losses from Hurricane Donna are estimated at \$0.25 to \$0.50 a share. After this interruption, the improving trend in underwriting should continue, and by the end of this year results should be on a profitable basis, although full-year operations probably will show a small net loss. Satisfactory underwriting profits should be seen in 1961. Investment income for 1959 is expected to reach a record \$3.85 per share, up from \$3.45 in 1958. *The stock (1) offers satis-*



Rautrax-N lowers high blood pressure gently, gradually... protects against sharp fluctuations in the normal pressure swing. Rautrax-N combines Raudixin, the cornerstone of antihypertensive therapy, with Naturetin, the new, safer diuretic-antihypertensive agent. The complementary action of the components permits a lower dose of each thus reducing the incidence of side effects. The result: Maximum effectiveness, minimal dosage, enhanced safety. Rautrax-N also contains potassium chloride — for added protection against possible potassium depletion during maintenance therapy.

Supply: Rautrax-N — capsule-shaped tablets — 50 mg. Raudixin, 4 mg. Naturetin, and 400 mg. potassium chloride. Rautrax-N Modified — capsule-shaped tablets — 50 mg. Raudixin, 2 mg. Naturetin, and 400 mg. potassium chloride. For complete information write Squibb, 745 Fifth Avenue, New York 22, N. Y.



Rautrax-N

English Quality—The
Proven Ingredients



Squibb Standardized Whole Root Rauwolfia Serpentina (Raudixin)
and Benzhydroflumethiazide ("Naturetin") with Potassium Chloride

RAUDIXIN, NATURETIN, AND NATURETIN-N ARE SERVICE TRADEMARKS.

STATISTICAL BACKGROUND OF SELECTED ISSUES

| *ISSUE— | CONSOLIDATED; NET INVEST. INCOME | | \$ PER SHARE— COMBINED NET EARN. | | DIVS. | 1960 PRICE RANGE | APPROX. PRICE ³ | YIELD % |
|--------------------|----------------------------------------|-------|----------------------------------------|-------|--------|---------------------|-------------------------------|---------|
| | 1959 | E1960 | 1959 | E1960 | | | | |
| §Continental | 3.45 | 3.85 | 1.78 | 3.50 | \$2.00 | 56½-44¾ | 46 | 4.3 |
| Glens Falls | 2.96 | 3.40 | 2.55 | 3.00 | 1.00 | 38 -33½ | 35 | 2.9 |
| Great Amer. | 4.05 | 4.25 | 3.88 | 5.00 | 1.60 | 47¾-40½ | 48 | 3.3 |
| Hartford | 2.34 | 2.50 | 2.94 | 3.50 | 1.10 | 52½-46¼ | 51 | 2.1 |
| †Ins. Co. | 2.70 | 2.90 | 3.04 | 3.75 | 1.80 | 68 -60¼ | 61 | 2.9 |
| †Reliance | 4.48 | 4.60 | 5.06 | 6.00 | ²2.20 | 58½-45¾ | 57 | 3.9 |

*Traded over-the-counter unless otherwise noted. §Listed New York Stock Exchange. †Traded American Stock Exchange. ¹Adjusted for equity in increase in unearned premiums. ²Plus 5% stock dividend. ³Because of the time-lag created by the mechanics of magazine publishing, investors should consult daily papers for latest prices.

factory income and (2) has interesting appreciation possibilities, given proper market conditions.

● GLENS FALLS INSURANCE—Prospects for this company are enhanced by its newly-acquired interest in a Canadian life insurance company, the operations of which are being rapidly extended into the United States. The property and casualty insurance business has shown steady improvement and should continue in that direction, except for interim interruptions, such as Hurricane Donna. With investment income continuing higher, a dividend increase should be forthcoming. *Purchases of the stock should work out well at current relatively low prices.*

● GREAT AMERICAN INSURANCE writes a conservative premium volume in relation to capital funds. As an offset, an aggressive investment policy is followed, and investment income has generally been more important than underwriting earnings. For 1960, net investment income is estimated at about \$4.25 a share, up from \$4.05 in 1959. The record of growth should be extended over the years ahead. Underwriting produced a profit in the first half of this year; after recent hurricane losses are out of the way, the improving trend should be resumed.

The stock has attraction for capital gain possibilities.

● HARTFORD FIRE has consistently compiled a superior underwriting record. A policy

of sound conservatism, with careful screening of risks, has stood the company in good stead, especially in recent difficult years. The expense ratio is one of the lowest in the industry. With a leading position in fire and casualty writings, the company entered the life insurance field recently.

The shares are of top quality and may be bought with confidence for investment accounts.

● INSURANCE CO. OF NORTH AMERICA—This issue, like Hartford Fire, is a "blue chip" in the insurance group. Except for 1957, the company has attained an underwriting profit each year since 1930, and investment income has climbed steadily at a favorable rate. A life insurance subsidiary, which began operations in 1957, has as its goal \$1 billion of life insurance in force by the end of 1962. *The outstanding record and the expectation that the company will continue to lead the industry in underwriting performance warrant a high regard for the stock.*

● RELIANCE INSURANCE—Market action so far this year has reflected relatively favorable underwriting achievements. In the first half, with underwriting profitable, combined net earnings jumped to \$3.42 a share from \$0.85 a year before, after adjusting for equity in the increase in unearned premiums. Despite Hurricane Donna, combined net in the neighborhood of \$6 is possible for the full year, and there is room for further improvement in 1961. *The stock appears conservatively valued in relation to improving earnings.*

PMB

"PREMARIN" WITH MEPROBAMATE

400

FOR PROVEN MENOPAUSAL BENEFITS

The vast majority of menopausal women, especially on the first visit, are nervous, apprehensive, and tense. PMB-200 or PMB-400 gives your patient the advantage of extra relief from anxiety and tension, particularly when the patient is "high strung," under prolonged emotional stress, or when psychogenic manifestations are acute. Proven menopausal benefits are confirmed by the wide clinical acceptance of "Premarin," specifically for the relief of hot flushes and other symptoms of estrogen deficiency, together with the well established tranquilizing efficacy of meprobamate.



Two potencies that will meet the needs of your patients: **PMB-200** — Each tablet contains conjugated estrogens equine ("Premarin") 0.4 mg., and 200 mg. of meprobamate. When greater tranquilization is necessary you can prescribe **PMB-400** — Each tablet contains conjugated estrogens equine ("Premarin") 0.4 mg., and 400 mg. of meprobamate. Both potencies are available in bottles of 60 and 500.

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5916

FROM COAST TO COAST



This year's earnings of CONTINENTAL CAN are placed at a maximum of \$3 a share against \$3.20 in 1959. The company operates in several highly competitive fields in which plant investments and operating economies do no more than keep profits fairly level. Price increases are not in immediate prospect. . . . Indications are that 1960 net of NATIONAL TEA will fall short of last year's \$1.28 a share, despite a small increase in sales. . . . Foreign business of BUCYRUS-ERIE has exceeded expectations, but domestic demand has been disappointing and there has been no indication yet of an improvement in the ordering rate. Carrying the vacant Richmond, Indiana, plant remains a drain on finances. A modest profit is the best to be expected this year, versus the loss of \$0.94 a share incurred in 1959.

After recording profits of \$0.80 a share in the first half, THEW SHOVEL may add only about \$0.45 to this figure in the final six months of 1960. Last year's net was equal to \$0.70 a

share. . . . MEREDITH PUBLISHING is now publishing its Better Homes & Gardens and Successful Farming magazines on a regional, rather than national, basis. The change is expected to attract additional advertising revenue. Earnings in the fiscal year ending June 30, 1961, are expected to increase modestly over the \$3.34 a share of 1959-60.

. . . Sales of FAIRCHILD CAMERA & INSTRUMENT in 1960 are estimated at \$75 million, up from \$43.4 million in 1959. Earnings are placed at \$3.50-\$4 on the shares outstanding after the Du Mont merger, even though Du Mont will contribute little to profits this year and is included for only five months. Informed sources look for even better results in 1961.

ALLIED PAPER is being hurt by price weakness in most grades of commercial printing paper, its "bread and butter" business. Full-year profits may be down to approximately \$0.50 a share from \$1.30 in 1959 (excluding \$0.32 nonrecurring gain). The loss carryforward credit of \$1.1 million at the start of 1960 will not be fully utilized; slightly more than \$500,000 will be carried over into 1961. . . . The order backlog of PITTSBURGH FORGINGS has come down fast, and sparse current inquiries suggest little basis for optimism over 1961 prospects.

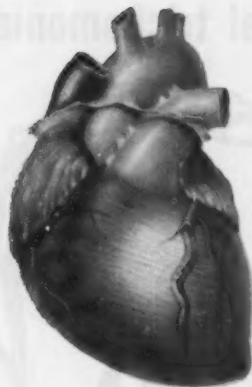
The second half may add only \$0.65 a share to the \$1.82 reported for the first six months.



BEECH-NUT LIFE SAVERS NET RISING

Benefits from the 3% increase in baby food prices last June are beginning to be reflected in current operations. The trend in coffee prices thus far this year also suggests improved results from this line. A good part of the added revenues resulting from the boost in chewing gum prices last May is being invested in advertising. Earnings for 1960 are tentatively estimated at \$2.70 a share, up from \$2.53 in 1959, and prospects favor somewhat higher

profits in 1961. Dividends were recently increased to \$0.42½ quarterly from \$0.40. Rich in cash, the company is looking at various companies producing lines that could be marketed through its distribution channels. It is understood that Beech-Nut has no interest in being absorbed through merger by a larger organization. *The stock has been a good performer in recent weak markets. If bought at 42 or less (N.Y.S.E.), it is recommended for income return and its defensive qualities.*



IN ANGINA PECTORIS AND CORONARY INSUFFICIENCY

... the treatment must go further than vasodilation alone. It should also control the patient's ever-present anxiety about his condition, since anxiety itself may bring on further attacks.



AFTER MYOCARDIAL INFARCTION

... it is frequently not enough to boost blood flow through arterial offshoots and establish new circulation. The disabling fear and anxiety that invariably accompany the condition must be reduced, or the patient may become a chronic invalid.

Protects your angina patient better than vasodilators alone

Unless the coronary patient's ever-present anxiety about his condition can be controlled, it can easily induce an anginal attack or, in cases of myocardial infarction, considerably delay recovery.

This is why Miltrate gives better protection for the heart than vasodilation alone in coronary insufficiency, angina pectoris and postmyocardial infarction. Miltrate contains not only PETN (pentaerythritol tetranitrate), acknowledged as basic therapy for long-acting vasodilation. What is more important — Miltrate provides Miltown, a tranquilizer of *proven* effectiveness in relieving anxieties, fear and day-to-day tension in over 600 clinical studies.

Thus, your patient's cardiac reserve is protected against his fear and concern about his condition...and his operative arteries are dilated to enhance myocardial blood supply.

Supplied: Bottles of 50 tablets. Each tablet contains 200 mg. Miltown and 10 mg. pentaerythritol tetranitrate.

Dosage: 1 or 2 tablets q.i.d. before meals and at bedtime, according to individual requirements.

REFERENCES

1. Ellis, L. B. et al.: *Circulation* 17:945, May 1958.
2. Friedlander, H. S.: *Am. J. Cardiol.* 1:395, Mar. 1958.
3. Riseman, J. E. F.: *New England J. Med.* 261:1017, Nov. 12, 1959.
4. Russek, H. I. et al.: *Circulation* 12:169, Aug. 1955.
5. Russek, H. I.: *Am. J. Cardiol.* 3:547, April 1959.
6. Tortora, A. R.: *Delaware M. J.* 30:298, Oct. 1958.
7. Waldman, S. and Peltner, L.: *Am. Pract. & Digest Treat.* 8:1075, July 1957.

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Miltown® (meprobamate) + PETN



WALLACE LABORATORIES / Cranbury, N. J.

CML-1569

To stop re-infection in vaginal trichomoniasis



THE WIFE IS ONLY HALF THE PATIENT

If treatment of vaginal trichomoniasis is to be effective, the role of the man as carrier and as cause of recurrence in the woman must be acknowledged and treated.¹ "Since the transmission of *T. vaginalis* through coitus occurs more frequently than is recognized, measures of prevention should be used. The most effective is the mechanical barrier."²

To control the cycle of infection and re-infection in vaginal trichomoniasis, most physicians recommend the use of a prophylactic during coitus,³⁻⁶ for a period of four to nine months after the end of the wife's treatment.

References: 1. Maeder, E. C.: *Journal-Lancet* 79:364 (Aug.) 1959. 2. Decker, A.: *New York J. Med.* 57:2237 (July 1) 1957. 3. Draper, J. W.: *Internat. Rec. Med.* 168:563 (Sept.) 1955. 4. Bernstein, J. B., and Rakoff, A. E.: *Vaginal Infections, Infestations and Discharges*, New York, The Blakiston Co., 1953. 5. Davis, C. H.: *West. J. Surg.* 63:53 (Feb.) 1955. 6. Karnaky, K. J.: *J. A.M.A.* 155:876 (June 26) 1954.

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TO ENLIST THE HUSBAND'S COOPERATION—Specify

RAMSES®

the prophylactic with "built-in" sensitivity

The exquisite sensibility preserved by a RAMSES prophylactic encourages rigorous cooperation necessary from the husband.

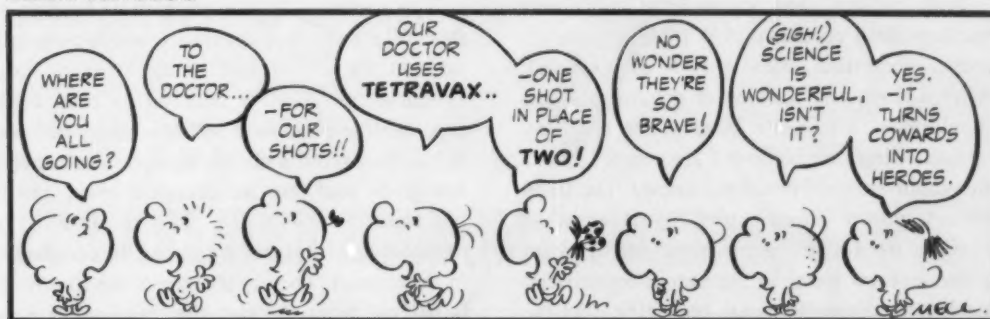
A tissue-thin, natural gum-rubber sheath of amazing strength and solid clinical reliability, RAMSES is silken smooth, delicately transparent—almost out of human awareness. Without imposition, or deprivation, for the sake of cure, the routine use of RAMSES with "built-in" sensitivity is readily adopted, even by the husband who fears loss of sensation.



FOR SIMULTANEOUS IMMUNIZATION
AGAINST 4 DISEASES:

Poliomyelitis-Diphtheria-Pertussis-Tetanus

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TETRAVAX[®]

DIPHTHERIA AND TETANUS TOXOIDS WITH PERTUSSIS AND POLIOMYELITIS VACCINES

now you can immunize against more diseases...with fewer injections

Dose: 1 cc.

Supplied: 9 cc. vials in clear plastic cartons. Package circular and material in vial can be examined without damaging carton. Expiration date is on vial for checking even if carton is discarded.

For additional information, write Professional Services, Merck Sharp & Dohme, West Point, Pa.



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AMERICAN TOBACCO PROFITS STEADY

This company is continuing its aggressive promotion of king-size Pall Mall and Dual Filter Tareyton cigarettes. While demand for high-filtration Hit Parade has remained disappointing, sales of Lucky Strike are beginning to firm, following a long period of decline.

The Riviera mentholated cigarette is being tested, and there are no immediate plans for national distribution. Notwithstanding the

absorption of costs of the new profit-sharing and retirement plans, earnings this year are estimated at a new high of \$4.70 a share, compared with \$4.61 in 1959, adjusted for the 2-for-1 split last May. Dividends of \$0.57½ quarterly on the split shares probably will be supplemented with an extra of \$0.50 early next year. *It is reasonably priced if bought at 63 or less (N.Y.S.E.) to yield 4.4%, and has appeal for its defensive characteristics.*

FOOD MACHINERY & CHEMICAL A GOOD VALUE

With military and commercial machinery backlogs both up about 25% from year-earlier levels, continued sales growth is expected. After a slow start, volume of defense business should show a gain for 1960 as the company fills a large order for the new M113 aluminum-armored personnel carrier. The trend toward greater infantry mobility is expected to stimulate still stronger demand for this item in the next few years. In the area of commercial machinery, comparisons are benefiting from the introduction of new food-handling equipment, such as egg sorters and (still pending) a grapefruit sectioner. Much of the company's labor-saving machinery is recession-resistant, since the purchasers must have them to stay competitive.

The company is allocating three-fourths of its capital budget to chemicals, which currently account for almost half of the business. One chemical operation is believed to hold forth considerable promise. Food Machinery believes it has discovered a chemical process to convert low-grade coal into metallurgical coke, and it has teamed up with U.S. Steel to construct a semicommercial plant for proving the economics of the process. The significance of the discovery is derived from the fact that pig iron is now produced where iron ore and metallurgical grade coal can economically be brought together; success of the new process would greatly multiply these locations and presumably reduce costs.

Earnings for 1960 are estimated at \$3 a

STATISTICAL BACKGROUND

| Year Ended Dec. 31 | *Net Sales | % Oper. Inc. of Sales | *Net Inc. | Common Share (\$) Data | | |
|--------------------|------------|-----------------------|-----------|------------------------|------------|-------------|
| | | | | Earns. | Divs. Paid | Price Range |
| 1960 | — | — | — | E3.00 | 1.00 | 58½-44½ |
| 1959 | 342.92 | 13.8 | 20.56 | 2.92 | 1.20 | 55¾-40 |
| 1958 | 323.16 | 13.2 | 16.53 | 2.39 | 1.06 | 46¼-23¾ |
| 1957 | 313.92 | 13.4 | 15.90 | 2.30 | 1.00 | 32¾-21¾ |
| 1956 | 302.16 | 13.7 | 15.88 | 2.36 | 1.00 | 38½-25½ |
| 1955 | 264.62 | 15.2 | 14.88 | 2.27 | 1.00 | 30¾-23¾ |
| 1954 | 233.40 | 14.5 | 12.12 | 1.90 | 1.00 | 26¾-18¾ |

*In millions of dollars. †Inc. rev. from leased mach. & processes. ‡Adj. from 2-for-1 split in 1958. E—Estimated.

Capitalization: Long-term debt, \$62,938,844; \$3.25 cum. conv. preferred stock, 9,955 shrs. (\$100 par), con. into 4.18 common shares; \$3.75 cum. preferred stock, 53,584 shrs. (\$100 par); common stock, 6,980,104 shrs. (\$10 par).

B-D MULTIFIT

Interchangeable Syringe
cuts breakage, replacement costs
and assembly time—every plunger
fits every clear glass barrel

FOR GREATER ECONOMY...MAXIMUM SAFETY

B-D YALE

Sterile Disposable Needle
provides greater safety through
new design features—sharper
points, tamper-proof packages,
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**QUIETING...
HYPOTENSIVE**

**without a chain of
side actions**

Butiserpine®

a conservative, safe amount of reserpine (0.1 mg. per tablet or teaspoonful) combined with 15 mg. BUTISOL sodium® buta-barbital sodium.

**Butiserpine Tablets, Elixir,
Prestabs® Butiserpine R-A
(Repeat Action Tablets)**

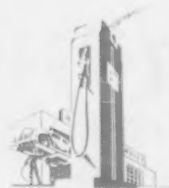
Maintenance Dosage:
Tablets or Elixir
one or two tabs. or tsp. daily.
Prestabs Butiserpine R-A
one tab. daily.

McNEIL LABORATORIES, INC.
Philadelphia 32, Pa.

McNEIL

share against \$2.92 in 1959. Dividends were recently raised to \$0.35 quarterly from \$0.30. Further earnings expansion is anticipated for 1961, even after giving full weight to the sober economic forecasts for that year.

With the company's basic growth rate expected to be at least 8% annually, subject to spurts as new developments or products come into the picture, the issue, at 51 or lower (N.Y.S.E.), offers good near and long-term investment value.



**CITIES SERVICE PLANS
ACQUISITIONS**

Once Cities Service completes acquisition of the minority interest in Arkansas Fuel Gas, it will no longer be a holding company under the terms of the Public Utility Holding Act and will be able to acquire other concerns. Plans apparently call for the acquisition of crude or marketing units through issuance of stock, but an increased investment in Richfield Oil (now 31% owned) is unlikely in the near future. The SEC will answer the objection of a small holder that the price of \$41 a share for Arkfuel is unfair, and the matter probably will be settled in a few weeks.

Meanwhile, Cities Service is maintaining exploratory drilling at the high rates of recent years, but has cut back on development drilling. Natural gas sales are providing a growing proportion of earnings, and the company's interest in chemicals, through joint projects with Continental Oil, is increasing. This year's earnings are estimated at \$4 a share versus \$3.96 in 1959, amply covering the \$0.60 quarterly dividend. *Yielding 5.2% at the recent price of 46 (N.Y.S.E.), this stock offers a good measure of appeal as one of the better situated domestic integrated oil situations.*

WHICH 341 STOCKS TO BUY AND SELL IN 1961!



1961 ANNUAL FORECAST

11 TIMELY NEW STOCK LISTS

Get ready to profit in the coming **NEW** Stock Market with one of the most important **ANNUAL FORECASTS** ever presented to investors.

NEW—Stocks to buy and sell now to be in a position to profit in the changing economy ahead.

NEW—Stocks that can outgain the market in 1961.

NEW—Special feature for new or seasoned investors: How to use Standard & Poor's methods to secure continuing stock market profits!

NEW—Exclusive Switch List of 139 stocks that should be sold now. **AND**

FEATURES These Official New S & P "Buy" Lists:

- 10 "Stocks for action"—Stocks capable of outgaining the market in 1961.
- 30 Best Low-Priced Stocks.
- 20 Growth Stocks for Long-Term Profits.
- 35 Candidates for Stock Splits.
- 32 Income Stocks with Profit Potential.
- 18 Blue Chip Stocks for Safety and Income.
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- 25 Candidates for Increased Dividends.
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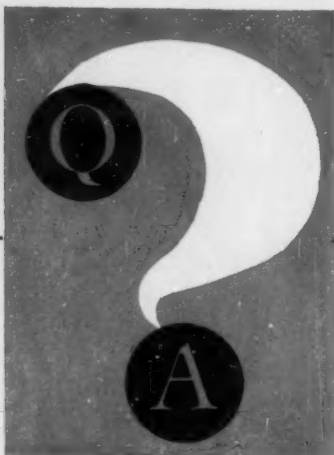
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Questions on investment may be addressed to this column in care of MEDICAL TIMES. Those of general interest will be answered in the column. It will be understood that no questions can be answered by mail.

● *What proportions of one's investments should be in common stocks, preferred stocks, bonds and cash?*

That is a question that has to be answered with a hedge: It all depends. It depends on what your investment objectives are and these investment objectives, again, can change with the age of the investor. Preferred stocks and bonds are fixed-income investments and therefore more appropriate holdings to those to whom stability of return is the big factor. Common stocks have a larger element of risk, countered by the opportunity to share in increased profits. Common stocks accordingly have a greater appeal to those who are less concerned with current return than with increasing their capital. For the average person, it would make sense to vary the holdings of common stocks, bonds and preferred stocks in accordance with his own immediate and ultimate objectives.

● *Why are railroad stocks so important that they get an index all to themselves? Judging from the headlines I see every day, this is a sick industry.*

The headlines come from the sick room, but they do hint that the doctors are trying to get the patient up and around. Mergers, if the latest headlines are a guide, may be the means of getting the patient out of bed. Railroads remain a basic distribution industry. In April of this year, despite the parlous condition of many

rails, there were at least twenty-one railroads or railroad systems that reported net operating income of more than \$1,000,000 for the month. In that same month, of course, there were a handful of railroads that reported an operating deficit.

● *When certain stocks become glamorous, as electronic stocks today, how can anybody tell which are the sound ones and which the unsound?*

Certainly not by rumor or common report. Your broker should be able to help you. He has or can get the available information on these so-called "glamour" companies. Often the hard facts about a company, such as sales, net from operations, net income, etc. are enough to dispel glamour. Sometimes they may be promising enough on the surface to encourage further investigation. Whether you are watching glamour stocks or others, the S.E.C. slogan, "Investigate before you invest," is a good one.

● *When I ask a broker for information about a company or companies, where does he get it?*

The ultimate or original source is the company itself or its officers. The information may reach your broker in a variety of ways: through his firm's research department, through information provided by a financial publisher such as Standard & Poor's, through a visit by a representative of his firm to the company and a talk with its officers, or as a result of talks that officers of the company have given to security analysts.



how much should a nasal decongestant do?

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how much should a nasal decongestant do?

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without causing drowsiness
stinging or burning
irritation or rebound
congestion

Alcon-efrin® does just that. It opens up nasal passages quickly, comfortably and safely and that's all! There is no danger of drowsiness...and no sting, burn or irritation of delicate nasal mucosa. The tonicity and pH of **Alcon-efrin** are adjusted to those of nasal secretions which assures comfort on instillation.

Alcon-efrin is a solution of phenylephrine HCl with benzalkonium chloride as preservative and wetting agent.

Alcon-efrin 12

(0.16% phenylephrine) for infants

Alcon-efrin 25

(0.25% phenylephrine) for children and adults

Alcon-efrin 50

(0.50% phenylephrine) for extra strength

Supplied in 1 oz. dropper bottles.
Alcon-efrin 25 also available in 30 cc. spray package.

Let us send you a half-dozen trial samples!

Gentlemen:

Please send me a half-dozen complimentary trial samples of Alcon-efrin.

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IN EMOTIONALLY PROJECTED
SMOOTH-MUSCLE SPASM...

Prompt, Profound
Protection...at both
ends of the vagus

PRO-BANTHINE®
with **DARTAL®**

Professional reliance on the therapeutic proficiency of Pro-Banthine in functional gastrointestinal disorders has made it the most widely prescribed anticholinergic.

The consistent relief of emotional tensions afforded by Dartal makes this well-tolerated tranquilizer a rational choice to support the antispasmodic action of Pro-Banthine in emotionally influenced smooth-muscle spasm.

These two reliable agents combined as Pro-Banthine with Dartal consistently control both disturbed mood and disordered motility when emotional disturbances project themselves through the vagus to provoke such gastrointestinal dysfunctions as gastritis, pylorospasm, peptic ulcer, spastic colon or biliary dyskinesia.

USUAL ADULT DOSAGE:

One tablet three times a day.

SUPPLIED as aqua-colored, compression-coated tablets containing 15 mg. of Pro-Banthine (brand of propantheline bromide) and 5 mg. of Dartal (brand of thiopropazate dihydrochloride).

G. D. SEARLE & CO.
Chicago 80, Illinois
Research in the Service of Medicine





*different people...
different needs*

A complete range of Lederle Vitamin-Mineral products enables you to select a specific formula to meet specific needs
for example:

GEVRAL® CAPSULES

Vitamin-Mineral Supplement Lederle

This comprehensive formula is a favorite for patients who simply require a dietary supplement...assures you that the patient is obtaining all vitamins and minerals necessary for everyday needs. Each capsule is dry-filled and "oil-burp-free". One capsule daily.

EACH CAPSULE CONTAINS: Vitamin A (Acetate) 5,000 U.S.P. Units; Vitamin D 500 U.S.P. Units; Vitamin B₁₂ with AUTRINIC® Intrinsic Factor Concentrate 1/15 N.F. Oral Unit; Thiamine Mononitrate (B₁) 5 mg.; Riboflavin (B₂) 5 mg.; Niacinamide 15 mg.; Pyridoxine HCl (B₆) 0.5 mg.; Ca Pantothenate 5 mg.; Choline Bitartrate 50 mg.; Inositol 50 mg.; Ascorbic Acid (C) 50 mg.; Vitamin E (as tocopheryl acetates) 10 I.U.; L-Lysine Monohydrochloride 25 mg.; Rutin 25 mg.; Ferrous Fumarate (Elemental iron, 10 mg.) 30.4 mg.; Iodine (as KI) 0.1 mg.; Calcium (as CaHPO₄) 145 mg.; Phosphorus (as CaHPO₄) 110 mg.; Copper (as CuO) 1 mg.; Fluorine (as CaF₂) 0.1 mg.; Manganese (as MnO₂) 1 mg.; Magnesium (as MgO) 1 mg.; Potassium (as K₂SO₄) 5 mg.; Zinc (as ZnO) 0.5 mg.

GEVRAL® T CAPSULES

High Potency Vitamins-Minerals Lederle

For the nutritionally sub-par patient whose requirements are especially high...this high-potency formula is particularly recommended in severe nutritional deficiency and convalescence. Also dry-filled, one capsule daily.

EACH CAPSULE CONTAINS: Vitamin A (Acetate) 25,000 U.S.P. Units; Vitamin D 1,000 U.S.P. Units; Vitamin B₁₂ with AUTRINIC® Intrinsic Factor Concentrate 1/2 N.F. Oral Unit; Thiamine Mononitrate (B₁) 10 mg.; Riboflavin (B₂) 10 mg.; Pyridoxine HCl (B₆) 2 mg.; Vitamin E (Tocopheryl acetates) 5 I.U.; Vitamin K (Menadione) 1 mg.; Ascorbic Acid (C) 150 mg.; Calcium Pantothenate 5 mg.; Niacinamide 100 mg.; Calcium (as CaHPO₄) 107 mg.; Phosphorus (as CaHPO₄) 82 mg.; Ferrous Fumarate (Elemental iron, 15 mg.) 45.6 mg.; Magnesium (as MgO) 6 mg.; Potassium (as K₂SO₄) 5 mg.; Iodine (as KI) 0.15 mg.; Copper (as CuO) 1 mg.; Manganese (as MnO₂) 1 mg.; Fluorine (as CaF₂) 0.1 mg.; Zinc (as ZnO) 1.5 mg.; Choline Bitartrate 25 mg.; Inositol 25 mg.; L-Lysine Monohydrochloride 25 mg.; Rutin 25 mg.

GEVRABON®

Liquid Vitamins-Minerals Lederle

This liquid vitamin-mineral formula has a tangy, sherry flavor. It can be served plain, chilled, or poured over ice (as a refreshing appetite stimulant). Particularly pleasing to geriatric patients and others who dislike swallowing capsules. Two tablespoonfuls a day.

EACH FLUID OUNCE (30 CC.) CONTAINS: Thiamine HCl (B₁) 5 mg.; Riboflavin (B₂) (as the phosphate) 2.5 mg.; Vitamin B₁₂ 1 mcgm.; Niacinamide 50 mg.; Pyridoxine HCl (B₆) 1 mg.; Pantothenic Acid (as panthenol) 10 mg.; Choline (as tricholine citrate) 100 mg.; Inositol 100 mg.; Calcium (as Ca glycerophosphate) 48 mg.; Phosphorus (as Ca glycerophosphate) 39 mg.; Iodine (as KI) 0.1 mg.; Potassium 10 mg.; Magnesium (as MgCl₂·6H₂O) 2 mg.; Zinc (as ZnCl₂) 2 mg.; Manganese (as MnCl₂·4H₂O) 2 mg.; Iron (as ferrous gluconate) 20 mg.; Alcohol 18%.

*Ask your Lederle Representative for
complete information on other Lederle vitamins.*





Photo: Oregon
State Highway Dept.

SKIING OUT WEST

Though the Northeast is the cradle of American skiing, the West has also developed many fine areas for this winter sport. In the West snow conditions are rarely disappointing; usually there's an abundance of powder snow each winter and crisp corn snow in spring. Ski areas continue to be expanded, with new resorts going up in pine-studded mountains.

Because of the greater distances involved, many Western skiers favor travel by rail as opposed to auto. The all-weather dependability of railroads in a country where highway travel often is treacherous is a big plus factor.

Most accessible by rail of all major western ski areas is The Big Mountain, at Whitefish, Montana, on the main line of the Great Northern Railway. GN's Empire Builder and Western Star, with twice-daily departures from Chicago and Seattle-Portland, stop only

The mountains of the West continue to grow in popularity as winter sports centers. They offer consistent snow conditions and good accommodations.



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WHY IS DIFFUSION IMPORTANT?

Because the active ingredients of a spermicidal preparation must diffuse rapidly into the seminal clot and throughout the vaginal canal to be clinically effective. Lanesta Gel offers this *dual* protection. Its four spermicidal agents quickly invade the clot to stop the main body of sperm. It spreads evenly and quickly throughout the vaginal canal—seeks out every wrinkle and fold that may offer concealment to sperm. With this rapid diffusion, your patient receives full benefit of the swift spermicidal action of Lanesta Gel—in minutes—a decisive measure in conception control.

In Lanesta Gel 7-chloro-4-indanol, a new, effective, nonirritating, nonallergenic spermicide, produces immediate immobilization of spermatozoa in dilution

of up to 1:4,000. The addition of 10 per cent NaCl in ionic form greatly accelerates spermicidal action. Ricinoleic acid facilitates rapid inactivation and immobilization of spermatozoa and sodium lauryl sulfate acts as a dispersing agent and spermicidal detergent.

Lanesta Gel with a diaphragm provides one of the most effective means of conception control. However, whether used with or without a diaphragm, the patient and you, doctor, can be certain that Lanesta Gel provides faster spermicidal action—plus essential diffusion and retention of the spermicidal agents in a position where they can act upon the spermatozoa.

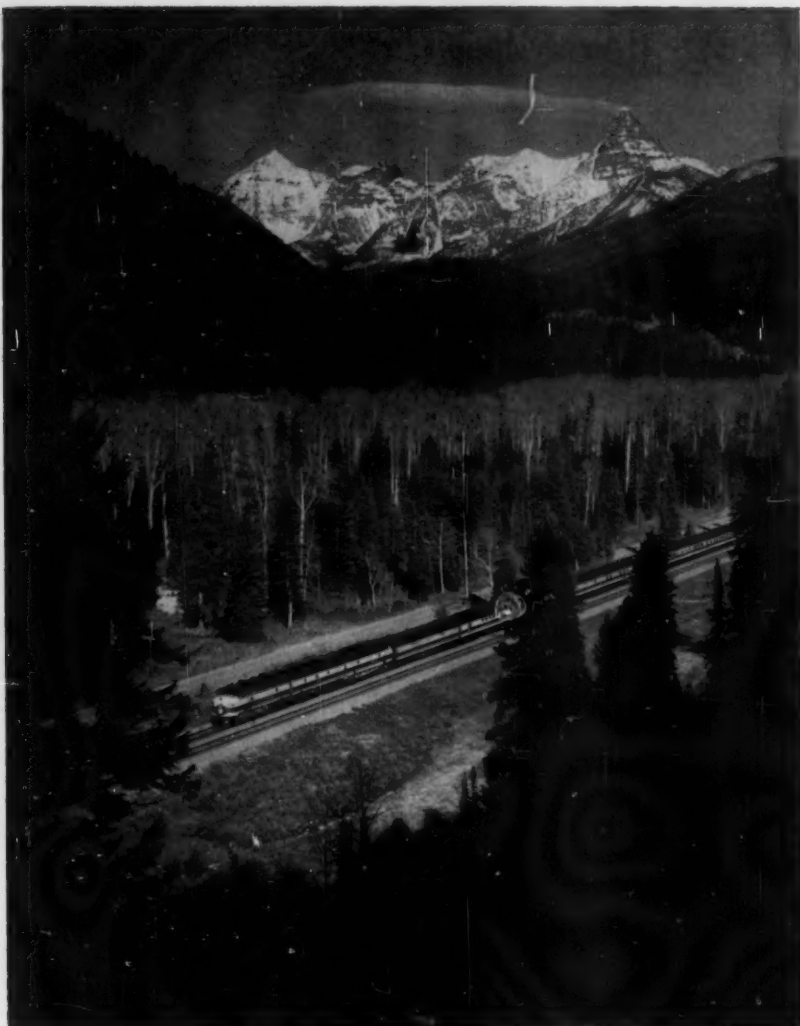


new Lanesta® Gel

Supplied: Lanesta Exquisit® . . . with diaphragm of prescribed size and type; universal introducer; Lanesta Gel, 3 oz. tube, with easy clean applicator, in an attractive purse. Lanesta Gel, 3 oz. tube with applicator; 3 oz. refill tube—available at all pharmacies.

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Manufactured by Ems Medical Laboratories, Inc., Alliance, Ohio. Distributed by GEORGE A. BREON & CO., New York 18, N. Y.



Great Northern
Railway Photo

The "Empire Builder" skirts the boundary of Glacier National Park, just a few miles east of Whitefish. Even in mid-spring, the peaks of the Rockies are laden with snow.

minutes away from The Big Mountain and offer both coach and Pullman accommodations.

Big news at The Big Mountain this year is the completion of its widely-heralded, 6,800-foot Heron double chairlift—one of the longest in the nation—which moves skiers up a vertical rise of 2,000 feet.

Greeting skiers there is a carpet of powder snow studded with towering pines. Through deep powder, skiers streak down uninterruptedly, for 2½ miles or more, and many branch off into the mountain's more than nine miles of open slopes and trails.

With the existing T-bar and Pomalift and rope tow facilities, the addition of the chairlift enables the area to handle more than 1,000 skiers daily without crowding.

Accommodations

Expansion fever also blossomed out in the ski lodge where additional luxury accommodations approximately double the resort's former capacity for overnight lodging. The snack bar has been converted into a dining room to augment the present dining facilities in The Big Mountain Chalet. A warming room and

Robitussin helps remove the cause of cough¹

Glyceryl guaiacolate (Robitussin) exerts "the most intense and prolonged"² expectorant action "of practically all drugs presently used clinically as expectorants."² It increases the secretion of Respiratory Tract Fluid almost 200 per cent.²

Increased R.T.F. helps liquefy sputum,^{2,4} making it less viscid and easier to raise³ and enabling the upward-beating tracheal and bronchial cilia to become more efficient.^{3,5}

And increased R.T.F. provides a demulcent effect that helps soothe dry, irritated membranes lining the respiratory passages.^{3,6}

Through these "significantly superior"² expectorant effects, Robitussin increases the probability that a cough will achieve its natural purpose—that is, to remove irritants such as exudates or mucus from the respiratory tract.^{1,4,5}

Robitussin[®]

glyceryl guaiacolate, 100 mg., in each 5 cc. teaspoonful

Robitussin[®] A-C

glyceryl guaiacolate, 100 mg.; propenpyridamine maleate, 7.5 mg.; and codeine phosphate, 10 mg.; in each 5 cc. teaspoonful

Exempt narcotic

references: 1. Blanchard, K., and Ford, R. A., *Journal-Lancet*, 74:433, 1954. 2. Cass, L. J., and Frederik, W. S., *Am. Pract. Dig. Treat.*, 2:844, 1951. 3. Hayes, E. W., and Jacobs, L. S., *Dis. Chest*, 30:441, 1956. 4. Blanchard, K., and Ford, R. A., *Clin. Med.*, 3:961, 1956. 5. Blanchard, K., and Ford, R. A., *Rocky Mt. M. J.*, Vol. 52, No. 3, 1955. 6. Boyd, E. M., et al., *Can. M. Assoc. J.*, 54:216, 1946.

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ELDEC Kapseals help offset the disorders of advancing age for the patient now in his middle years. Supplying numerous valuable dietary and metabolic factors, ELDEC Kapseals provide the patient with comprehensive physiologic supplementation to meet the threat of nutritional and hormonal deficiencies...aid him in meeting the problem of declining health during the years ahead. With ELDEC Kapseals, the patient can plan ahead for tomorrow with a greater assurance of good health and well-being.



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Sunshine above, clouds below. A party of skiers take time out to have a look around from the heights of The Big Mountain, Montana. Flathead Valley lies beneath the blanket of clouds.

Great Northern Railway Photo



cafeteria for day and week-end skiers also have been added to the lodge.

The double chairlift, which has been the major construction project for scores of workers this past summer, has 117 chairs with foot and arm rests and is supported by 26 tubular steel towers.

Boasting a capacity of 530 skiers per hour, it offers challenging runs for the expert, but Karl Hinderman, head of The Big Mountain ski school, says his instructors can take a third-lesson beginner from the summit of the mountain to the base of the lift without getting the skier "in over his head."

Farther West, on Great Northern's main line, the Cascade Mountains of Washington and Oregon are uniquely situated, generally in a north south direction, to receive the moist ocean air that dumps a plentiful snow supply.

The long-time popularity of skiing in the Pacific Northwest has produced many notable facilities there, making it a favorite meeting place for skiers from all over the nation. In this area ski centers are located a few miles from the major centers of population.

Washington's Mount Baker, 55 miles from Bellingham, Wash., Mount Spokane, 30 miles



from Spokane, and Snoqualmie, 46 miles from Seattle, have proven to be favorite ski sites.

Mount Baker, advertising 5,200 feet at top of chairlift, features overnight facilities in Mount Baker Lodge and boasts average snow depth of 14 to 22 feet.

Mount Spokane, whose chairlift ends at 5,881 feet, has snow depth of 6 to 10 feet, with lodging available at Spokane.

Snoqualmie's three-fourth-mile chairlift reaches an area at 3,800 feet where snow depth of 12 to 14 feet is common. All areas have additional tows and services.

Timberline Lodge is one of the best ski areas in the West. This Oregon ski-haven, perched at 6,000 feet on Mount Hood, has two chairlifts, and a Sno-Cat hauls skiers to the 10,000-foot level and below lies eight miles of trails.

The lodge accommodates 250 overnight guests and has two restaurants, two cocktail lounges and an all-weather swimming pool.

The famed Pepi Gabl ski school offers classes to beginners and experts alike.

Although these ski areas are the principal resorts in the Pacific Northwest served by the GN, there are others which can easily be reached by bus or rented car from rail points.

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- 10 important vitamins plus minerals to help maintain cellular function and to correct deficiencies
- protein improvement factors to help compensate for poor food selection
- digestive enzymes to aid in offsetting decreased natural production
- steroids to stimulate metabolism and prevent or help correct protein deficiency states

Packaging: ELDEC Kapseals are available in bottles of 100.



PARKE-DAVIS

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Detroit 32, Michigan

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New Florida Attraction

Museum featuring fossil display opened in Bartow area on the banks of the Peace River. Three dimensional murals, dioramas and full-sized models of extinct animals also can be seen.

Polk County's newest attraction for visitors this winter at Bartow, Florida, is the fossil-filled Phosphate Museum at Peace River Park on State Road 60. The unusual museum installation opened in November.

Phosphate, multi-million dollar industry in the Bartow area, is dredged up by dragline from surrounding Peace River Valley lands. Tons of phosphate-loaded earth come up with the bites of giant shovels from deposits laid down eons ago.

Some 80 percent of the nation's phosphate is mined within a 35-mile radius of Bartow. This phosphate-bearing earth sometimes contains the fossilized bones of mastodons, saber-toothed tigers—which paleontologists call smilodon—and blue triangles with serrated edges, the teeth of big sharks which once swam the warm shallow seas covering the state those eons ago.

Many of these fossilized bones are on display along with spectacular three-dimensional murals and dioramas depicting the history and development of the phosphate industry and its 200 by-products.

Life-Sized Models

The display building houses the finest collection of pleistocene fossils in the nation and is considered far more complete than that in the Smithsonian Institution. Life-sized models in several exhibits will give visitors an idea of the life which swam, crawled, walked and flew in this section of Florida before man's appearance. Other displays, strata maps, murals and motion exhibits will show how phosphate was formed and the numerous uses which it has.

The museum and park are located on the banks of the Peace River, where phosphate was discovered by accident in 1888, and in famous nearby Bone Valley. This was the site of many fossil discoveries and of the first mines.

An attractively designed rock garden, a part of the museum building, is in the rear along with an adequate parking area. Cost of admission at the county operated educational display is \$1 for adults year round, children 12 to 18, 50 cents, and children under 12, free.

2

alert tranquillity



S^{triatran}

1-MYLCAMATE

a new, improved, more potent relaxant for anxiety and tension

Clinical reports indicate:

- effective in half the dosage required with meprobamate
- significantly less drowsiness than with meprobamate, phenothiazines, or the psychosedatives
- does not impair intellect, skilled performance, or normal behavior in recommended dosage
- neither depression nor clinically significant toxicity in recommended dosage

STRIATRAN is indicated in anxiety and tension, occurring alone or in association with a variety of clinical conditions.

Usual Adult Dosage: One tablet three times daily, preferably just before meals. In insomnia due to emotional tension, an additional tablet at bedtime usually affords sufficient relaxation to permit natural sleep.

Supply: 200-mg. tablets, coated pink, bottles of 100.

While no absolute contraindications have been found for **STRIATRAN** in the recommended dosage, the usual precautions and careful supervision required with all new and potent drugs should, of course, be observed.

Additional information available to physicians on request; write Professional Services, Merck Sharp & Dohme, West Point, Pa.



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Old Vienna at its Best



The winter holiday season in Vienna starts at the end of November and continues into January. This is a time of colorful displays, grand music and age-old spectacle.

Vienna, where the most brilliant modern spectacles unfold side by side with age-old ceremonies, is a true Christmas city. According to the Vienna Tourist Commission, the city's Christmastide is long, starting with the hanging of the Advent Wreath at the end of November, and continuing until it merges with the high revelry of *Fasching* (Carnival) in mid-January.

The Advent Wreath, with its four colored candles, its fluttering penitential purple streamers, is fashioned of fir branches lavishly threaded with gold. Shortly after it is hung on the main chandeliers of schoolrooms, inns, offices and fashionable salons, gold begins to gleam everywhere. Gold threads appear mysteriously on the rugs and upholstered furniture of the most fashionable drawingrooms; gold twinkles from every display in every shop. Gold is the Christmas symbol.

Vienna legend says the *Krist Kindl* (Christ Child), about to come into the world, has sent the littlest angels, the *Stander In* to scatter gold before Him. However, a fearsome figure, the dread *Krampus*—the old black-furred, horned, cloven-hoofed Devil of medieval nightmare—puts in his appearance in the company of the good Bishop Nicholas, on the evening of saint's feast, December 6th. The ill-matched pair make the round of homes and—to the tourists' delight—of the inns and wine taverns, the one punishing the wicked with switchings, the other distributing consolatory gifts to all. Cleverly made little figures of the *Krampus* and *St. Nicholas*, sold in Vienna, find their way around the world.

Krist Kindl Market

Well worth a holiday visit is the gay Krist Kindl Market, which opens in front of the Fair Grounds on St. Nicholas' Day, stays open days and evenings until Christmas Eve. So convenient is its location in back of the museums, not far from the Opera, that foreign visitors alternate their shopping sprees for *haute couture* products and heirlooms on the *Karntnerstrasse* and the *Graben* with frequent forays in quest of the exquisite tree ornaments and crib figures which will be handed down from generation to generation afterwards.

Many an international friendship burgeons amid the toys, the tinsel, the *lebselter* (iced hearts and other cutouts of hard gingerbread inscribed with suitable greetings). Young and not-to-young Viennese, fresh from school, or in full dress on their way to the Opera, throng the market, aglow with holiday enthusiasm.

The Opera, the concert halls, the *Stadthalle*, the theaters, the art galleries, the palaces begin to put on their most splendid shows during Christmastide. The Viennese themselves, in their best attire, sally forth from the gourmet restaurants they frequent, to rub elbows with all the world in the gold and marble halls of the new Opera House. In the vast *Stadthalle* and in the big concert halls, Christmas oratorios are sung by the world's ranking choirs and Christmas compositions of the masters who loved and worked in Vienna are played by the Philharmonic and the Vienna Symphony.

In the *Stadthalle*, too, the world's most popular ice show premieres the production it will take on tour in January. "Illusions" is the name



in the family circle...all-round, year-round
vitamin support with **ABDEC®** Kapseals®

ABDEC Kapseals provide comprehensive multivitamin protection all through the year. Each ABDEC Kapseal contains: Vitamin A-10,000 units (3 mg.); Vitamin D-1,000 units (25 mcg.); Vitamin C (ascorbic acid)-75 mg.; Vitamin B₁ (thiamine) mononitrate-5 mg.; Vitamin B₂ (G) (riboflavin)-3 mg.; Vitamin B₆ (pyridoxine hydrochloride)-1.5 mg.; Vitamin B₁₂ (crystalline)-2 mcg.; dl-Panthenol-10 mg.; Nicotinamide (niacinamide)-25 mg.; Vitamin E (supplied as d-alpha-tocopheryl acid succinate)-5 I. U. **DOSAGE:** for the average patient, 1 ABDEC Kapseal daily. ABDEC Kapseals are supplied in bottles of 50, 100, 250, and 1,000. Also available: ABDEC Drops in 15-cc. and 50-cc. bottles with calibrated plastic droppers.

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PARKE-DAVIS



Christmas at Sea

Christmas at sea aboard the Cunard Line's 35,000-ton luxury liner *Mauretania* will be celebrated with the traditional festivities of an old English Yule while passengers enjoy warm weather cruising in the sunny Caribbean.

The *Mauretania* sails from New York on December 20 for a 13-day voyage with calls at six ports in the West Indies, and those fortunate enough to be aboard will enjoy a Christmas at sea with a menu which recalls the Dickensian feasts of Merry Olde England. Roast goose, chestnut stuffed turkey, suckling pigs, and plum pudding trimmed with holly and served aflame represent only a fraction of the items on the festive board.

The numerous public rooms will be deco-

rated with greens, and the huge Christmas trees in the restaurants will wear glittering lights and ornaments. A carol hour, parties for the children with Santa Claus himself on hand, a roving band of minstrels, and an after dinner party in the Grand Hall are all planned for December 25 while the *Mauretania* steams from Curacao to Cristobal.

Minimum rate for the Christmas and New Year's Cruise is \$395.

The *Mauretania* will also make five other cruises to the West Indies sailing from New York February 4th, 18 days, 11 ports, \$500 up; February 25th, 17 days, 10 ports, \$465 up; March 18th, 15 days, 9 ports, \$415 up; April 4th, 12 days, 6 ports, \$300 up; April 18th, 12 days, 6 ports \$300 up.



of this year's show. Incidentally, the skating-for-all (young, not-so-young, novices, experts) offered at the *Stadthalle* and the *Eislaufverein*, which boasts Europe's largest outdoor rink, tempts many visitors. Operettas, ballet, drama, the parties that open the big art shows, are all parts of this season.

Widespread celebration ensues on December 21st with the Christmas club pay-off, for Austrian Christmas clubs are not saving schemes, but methods of a putting a trifle aside regularly to give a grand Christmas feast. These take place in wine taverns, ancient inns and famous restaurants where all present are invited to join the fun.

Even Vienna's birds help celebrate on December 24th. Everyone watches the Christmas of the birds, for then Vienna lights up its own gigantic tree decorated with ornaments harmless to birds and laden with food for every winged inhabitant of the Inner City. To see them enjoying it in their thousands is a grand sight.

On the 24th, American guests repair to the parties arranged by the Austro-American

Society for those who have signed the Embassy book. Christmas Eve is strictly a family occasion with the Viennese. They consume much apple strudel, light their trees, give the children their presents, finish the Christmas carp in the evening, then emerge to join the visitors at midnight mass.

Some travelers go out to Alpine villages to see the string of peasant torches twinkling down the snow-clad slopes toward the lighted churches in the dark and starry night. Others prefer the grandeur of the ceremony at the chapel of the old Imperial Palace (*Hofburg*). There, the angelic voices of The Vienna Boys Choir are lifted in Austria's own carol, "Silent Night, Holy Night," to be broadcast and rebroadcast until it encircles the globe.

Right after Christmas, even before *Sylvesterabend* (New Year's Eve) begin those inimitable Vienna balls . . . glamorous, romantic, compounded of the stuff of memory. From Christmas until Lent, Vienna and its welcome visitors dance or watch with delight while others dance, sipping and nibbling elegantly meanwhile.

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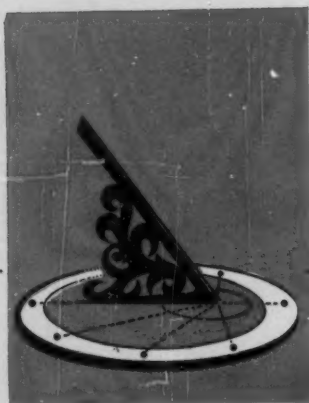
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Calendar of Meetings

A listing of important national and international medical conferences

JANUARY, 1961

Nassau, Bahamas. Bahamas Serendipity Conference, Jan. 15-28. *Contact:* Mr. Irvin M. Wechsler, P.O. Box 1454, Nassau, Bahamas.

Acapulco, Mexico. International Fertility Association, Jan. 28-31. *Contact:* Dr. M. Leopold Brodny, 4646 Marine Dr., Chicago 40, Ill.

FEBRUARY

Washington, D. C. American Academy of Allergy, Feb. 6-8. *Contact:* Mr. James O. Kelly, 756 N. Milwaukee St., Milwaukee 2, Wis.

MARCH

Dallas, Texas. American College of Allergists, Mar. 12-17. *Contact:* Dr. Howard G. Rapaport, 16 E. 79 St., New York City, N. Y.

New Orleans, La. New Orleans Graduate Medical Assembly, Mar. 6-9. *Contact:* Mrs. Irma B. Sherwood, 1430 Tulane Ave., New Orleans 12.

APRIL

Miami Beach, Fla. American Academy of General Practice, April 17-20. *Contact:* Mr. Mac F. Cahal, Volker Blvd. at Brookside, Kansas City 12, Mo.

Nassau, Bahamas. Bahamas Medical Conference, April 3-15. *Contact:* Mr. Irving M. Wechsler, P.O. Box 1454, Nassau, Bahamas.

Chicago, Ill. Aerospace Medical Association, April 24-26. *Contact:* Dr. Willion J. Kennard, c/o Washington National Airport, Washington, D.C.

Washington, D.C. American Academy of Pediatrics, April 10-12. *Contact:* Dr. E. H. Christopherson, 1801 Hinman Ave., Evanston, Ill.

Miami Beach, Fla. American College of Obstetricians and Gynecologists, April 21-28. *Contact:* Mr. Donald F. Richardson, 79 W. Monroe St., Chicago 3, Ill.

Atlantic City, N. J. American Physiological Society, April 10-14. *Contact:* Mr. Ray G. Daggs, 9650 Wisconsin Ave., Washington 14, D.C.

Atlantic City, N. J. American Psychosomatic Society, Inc., April 29-30. *Contact:* Joan K. Erpf, 265 Nassau Rd., Roosevelt, N. Y.

MAY

Miami Beach, Fla. American College of Physicians, May 8-12. *Contact:* Dr. Edward C. Rosenow Jr., 4200 Pine St., Philadelphia 4, Pa.

JUNE

New York, N. Y. American Medical Association, Annual Meeting, June 26-30. *Contact:* Dr. F. J. L. Blasingame, 535 N. Dearborn St., Chicago 10, Ill.



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Now let's see...where to go. There's always the Caribbean, or Africa, maybe. And Europe is fun for the Winter Sports. But then, the Orient is popular, too. Or why not make it Round-the-World. Hard to decide *where* to go. But never *how*. BOAC is the natural choice for that. Flies with Rolls-Royce 707's, Comet jet liners or jet-prop Britannias to all of 51 countries on six continents, so just choose the spot and you can bet BOAC jets there.

And rather than be curdled by Winter, it's nice to be cuddled in BOAC's fashion. You know...service and the like. No one does it quite as BOAC's Cabin Crews do. They make the "life" aboard truly pleasant. Convivial drinks. Delicious food. They're positively exuberant in their care

for your comfort. Makes a vacation worth taking.

And in the brass tacks department, let's mention budget. You know, Winter is family-travel time on BOAC. We won't go into the arithmetic, but savings are impressive on the Family Fare Plan. Then, there's the 17-Day Economy Excursion Fare. Example: as little as \$293. round-trip, New York-Glasgow, on the jet-prop Britannia. Hard to pass up a bargain like that. And you can even "Go Now - Pay Later".

Let your Travel Agent help you shop through the BOAC world of places to vacation this Winter. Or contact your BOAC office.

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RYNATAN has more published clinical proof of effectiveness, safety and long action* than any other oral decongestant.

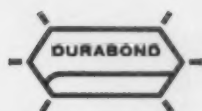
1. Report on a New Repository Principle, Med. Sc. 3:376, 1958. **2.** Steller, R. E.; DeMar, E. A., and Schwartz, F. R.: Indust. Med. & Surg. 28:362, 1959. **3.** Villanyi, L., and Stillwater, R. B.: E.E.N.T. Monthly 38:650, 1959. **4.** Lawler, E. G., and Limperis, N. M.: Clin. Med. 5:1669, 1958. **5.** Simon, D.: Clin. Med. Sept., 1960. **6.** Sherwood, H., and Epstein, J.: New York J. Med. 60:1793, 1960. **7.** Kile, R. L.: Antibiotic Med. & Clin. Therap. 5:578, 1958.

RYNATAN TABULES keep heads crystal clear for 10-12 hours with a single oral dose. Each tabule contains: Phenylephrine tannate, 25 mg.; Chlorpheniramine tannate, 8 mg.; Pyrillamine tannate, 25 mg. **Adults:** 1 or 2 tabules each 12 hrs. **Children:** Each 12 hrs.—6-7 yrs. ½ tabule; 8-11 yrs. ½-1 tabule; 12 yrs. and older 1-2 tabules.

RYNATAN SUSPENSION . . . the only long-acting liquid oral nasal decongestant for children. Each 5 cc. contains: Phenylephrine tannate, 5.0 mg.; Chlorpheniramine tannate, 2.0 mg.; Pyrillamine tannate, 12.5 mg. **Children:** Each 12 hrs.—6 mos.—1 yr. ½ tsp.; 2-4 yrs. ½ tsp.; 5-7 yrs. 1 tsp.; 8-11 yrs. 2 tsp.; 12 yrs. and older 2-3 tsp. Adjust dosage as required.

***All Rynatan-Rynatuss products employ**

Heister



AND NOW...YOUR PATIENTS CAN HAVE ALL THE BENEFITS OF RYNATAN PLUS COUGH CONTROL, IN

NEW PRODUCT RynatussTM

relieves not only the cough...but clears the entire breathing apparatus all-day or all-night with a single oral dose*

action: Rynatuss provides—

- **an effective antitussive** to inhibit nonproductive cough. It is non-narcotic, thus does not possess the depressive, constipating or habituating properties inherent in such antitussive agents as codeine. However, experimental tests have shown that the antitussive in Rynatuss is 1½ times as active as codeine in controlling the cough reflex.
- **a superior antihistamine** to reduce bronchial secretion and to counteract allergic reactions.
- **a potent vasoconstrictor** to decongest mucous membrane and alleviate postnasal drip.
- **a reliable bronchodilator** to aid in the removal of accumulated secretions.

indications:

Coughs, mild or severe, acute or chronic, in head or chest congestion, colds, sinusitis, bronchitis.

RYNATUSS TABULES. Each tabule contains: Carbetapentane tannate (non-narcotic), 60 mg.; Chlorpheniramine tannate, 5 mg.; Ephedrine tannate, 10 mg.; and Phenylephrine tannate, 10 mg. **Adults:** 1 to 2 tabules each 12 hours. **Children:** 2 to 6 years old ½ tabule each 12 hours; 6-12 yrs. 1 tabule each 12 hours.

RYNATUSS SUSPENSION. Each 5 cc. contains: Carbetapentane tannate, 30 mg.; Chlorpheniramine tannate, 4 mg.; Ephedrine tannate, 5 mg.; and Phenylephrine tannate, 5 mg. **Children** under 6 years old ¼ to ½ tsp. twice daily; 6 years or older 1 or 2 tsp. twice daily.

DURABOND[®], the only long-acting principle proven by radioactive tracer studies in human blood levels. (Bogner, R. L., and Moses, C.: Evaluation of a Sustained Release Principle in Human Subjects Utilizing Radioactive Technique, to be published, 1960.)

IRWIN, NEISLER & CO. • DECATUR, ILLINOIS



MODERN THERAPEUTICS

New therapies and significant clinical investigations
abstracted from other journals.

Communication with the Patient

There is a multi-channel system of communication between patient and physician. These different channels are formed by literal verbal, extraverbal, and non-verbal modes of communication. The physician receives different messages through different channels at the same time. His attention to verbal communication should not lead him to disregard information available through the other channels. Some ideas can be effectively communicated only by non-verbal means. To understand his patients, the physician should be competent in the language of non-verbal communication.

AINSLIE MEARES, M.D.

The Lancet (1960), No. 7126, Pp. 663-667

Human Bone Marrow Transplants

1. Twenty-six attempts at transplantation of human bone marrow obtained from excised bones were carried out in nineteen patients with acute leukemia and other marrow depletion syndromes with or without preliminary treatment with total body radiation. There was no evidence of a permanent "take" after any of the attempts, although signs of transient functioning of the marrow appeared in three instances.

2. Four additional patients received marrow aspirated from living donors (two homologous and two autologous). One patient with reticulum cell sarcoma underwent a relatively long

remission after receiving 100 mg. of nitrogen mustard, followed by injection of her own preserved marrow.

3. The course of the patients with acute leukemia did not in general seem to be altered significantly by radiation and injections of marrow. The explored sources of procurement and methods of processing and administering marrow from excised bones may provide a basis for the utilization of human marrow in future attempts to transplant bone marrow.

FARID I. HAURANI, M.D., EVALYN REPP-
LINGER, M.B. and L. M. TOCANTINS, M.D.

The Am. J. of Med. (1960), Vol. XXVIII,
No. 5, Pp. 794-806

Carcinoma of Esophagus Treated by Excision

Experience with a hundred and forty cases of esophageal carcinoma between 1948 and 1958 suggests that the Ivor Lewis and Allison operations, for resection of growths of the middle and lower thirds of the esophagus and cardia, offer good symptomatic relief and a prospect of long postoperative survival.

Less extensive resections and bypass operations give poor results, and they should be abandoned in favor of intubation by plastic tubes of the Mousseau-Barbin type.

K. S. MULLARD, M.A., M.B.

The Lancet (1960), No. 7126, PP. 677-679

Continued on page 160a

she calls it "nervous indigestion"

diagnosis: a wrought-up patient with a functional gastro-intestinal disorder compounded by inadequate digestion. **treatment:** reassurance first, then medication to relieve the gastric symptoms, calm the emotions, and enhance the digestive process. **prescription:** new Donnazyme—providing the multiple actions of widely accepted Donnatal® and Entozyme®—two tablets t.i.d., or as necessary.

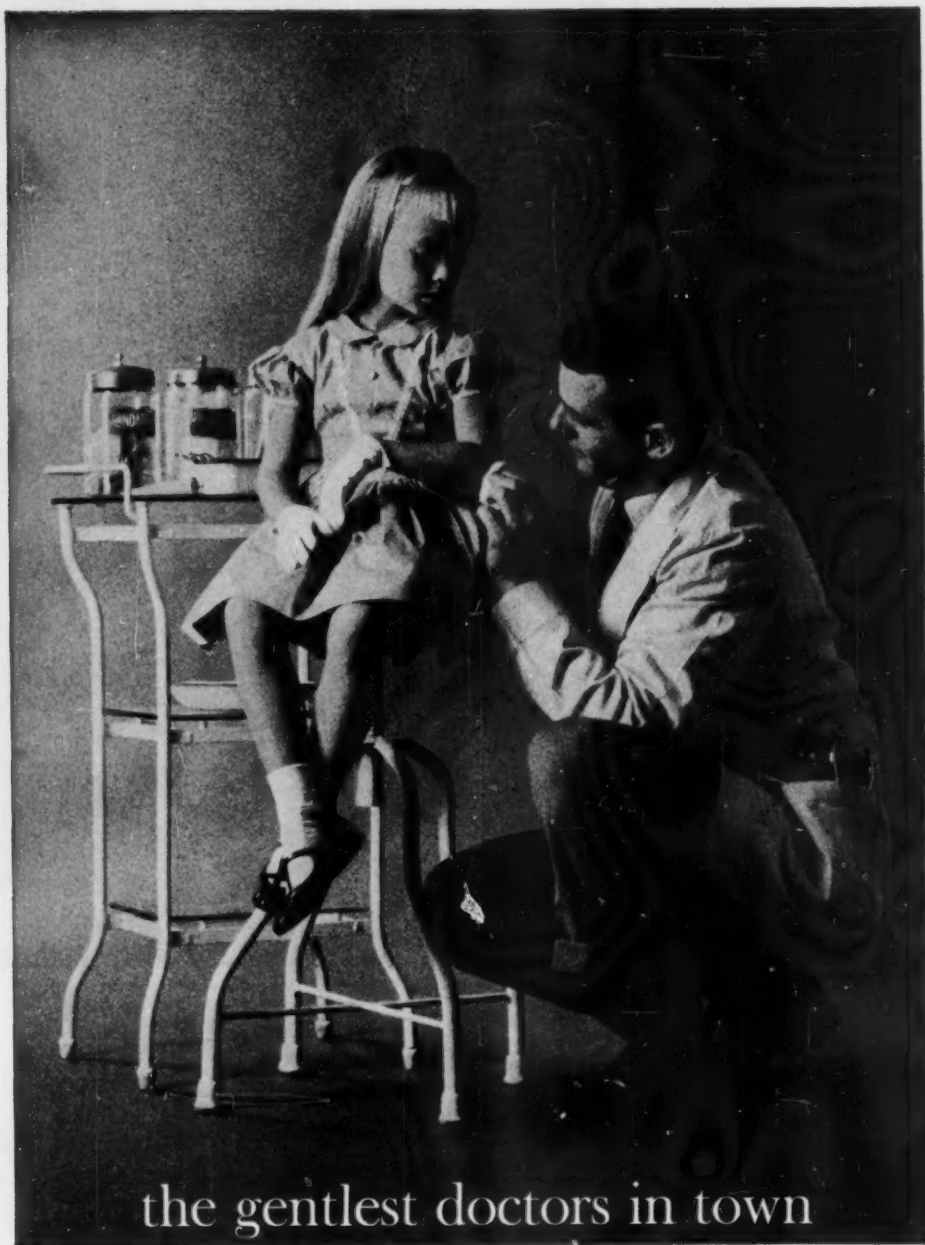
Each Donnazyme tablet contains

—**In the gastric-soluble outer layer:** Hyoscyamine sulfate, 0.0518 mg.; Atropine sulfate, 0.0097 mg.; Hyoscine hydrobromide, 0.0033 mg.; Phenobarbital ($\frac{1}{6}$ gr.), 8.1 mg.; and Pepsin, N. F., 150 mg. **In the enteric-coated core:** Pancreatin, N. F., 300 mg., and Bile salts, 150 mg.

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DONNAZYME®

A. H. ROBINS COMPANY, INCORPORATED • RICHMOND 20, VIRGINIA



the gentlest doctors in town
 stop pain with **Nupercainal**
(dibucaine CIBA)

...For minor cuts and burns, sunburn, hemorrhoids, removing sutures, performing routine office surgery, making instrument examinations. And, to best suit every situation, there's a choice of Ointment, Cream, Lotion, Suppositories. Complete information available on request.

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 SUMMIT, N.J.



stop hemorrhoid pain with
NUPERCAINAL SUPPOSITORIES
 exact dosage • fast acting

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for immediate asthma relief

and 22½% more vital capacity

Medihaler®

for automatically controlled dosage by aerosol administration



**for maximal convenience
at home or on-the-go**

Available with either of the two
outstanding bronchodilators

Medihaler-EPI®

Epinephrine bitartrate, 7.0 mg. per cc., suspended in inert, nontoxic aerosol vehicle. Contains no alcohol. Each automatically measured dose contains 0.15 mg. epinephrine.

Medihaler-ISO®

Isoproterenol sulfate, 2.0 mg. per cc., suspended in inert, nontoxic aerosol vehicle. Contains no alcohol. Each automatically measured dose contains 0.075 mg. isoproterenol.

Optimal effect from Minimal Dosage



Northridge, California

Desitin Ointment as Peristomal Medication

Postsurgical problems for the patient with an ileostomy or colostomy are both psychologic and physiologic. Adjustment to the new way of life is made particularly difficult if the area involved is subject to peristomal edema, excoriation and accompanying itching, burning and scattered areas of recurrent skin breakdown. Various factors have been suggested as being causative agents for these difficulties which contribute so greatly to the discomfort of the patient, but the urgent need for their alleviation is unquestioned. This peristomal irritation begins, quite naturally, during the first six postoperative weeks, and frequently persists in a chronic phase in spite of curative measures. In a series of patients studied by the author, each was treated in a consecutive cycle with several products, and the results evaluated. The materials used were: boric acid ointment; Vaseline; aluminum paste; zinc oxide, and

Desitin ointment, a combination of cod liver oil, zinc oxide, talcum, petrolatum and lanum. Apparently, the Vaseline when used in the early stages of the test showed slower progress in healing. Otherwise, it was felt that each of the individual items, when applied regularly and with care, exerted a definite influence in producing regression of the peristomal edema, excoriation, and skin breakdown with relief of the accompanying pain, burning and itching as well as showing improvement in the psyche, appetite and nutrition of the patient. It was also noted that the Desitin ointment caused the most rapid relief from the itching, burning and pain in the early stages. The time required for the complete healing of the involved area varied between 15 and 26 days.

JEROME WEISS, M.D.

Am. J. of Gastroent. (1960), Vol. 34,

No. 1, P. 83

Continued on page 165a

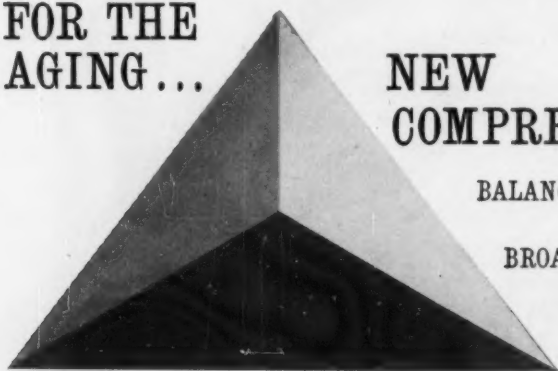
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MOOD ELEVATION



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1 small capsule every morning

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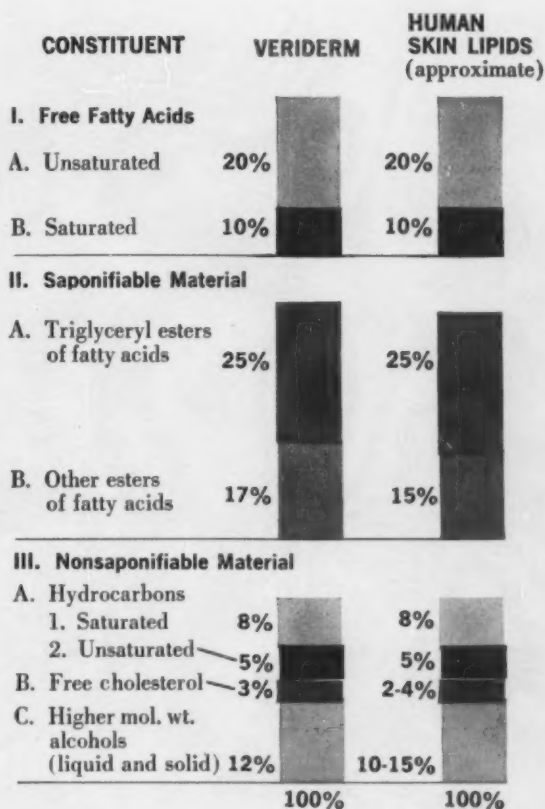
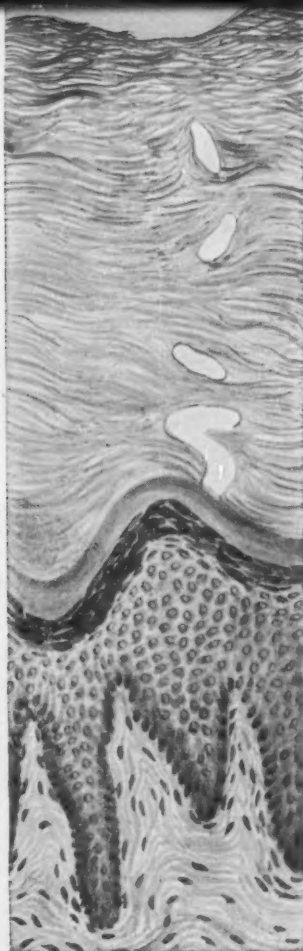
Geriatric Vitamins-Minerals-Hormones-d-Amphetamine Lederle

Each capsule contains: Ethinyl Estradiol 0.01 mg. • Methyl Testosterone 2.5 mg. • d-Amphetamine Sulfate 2.5 mg. • Vitamin A (Acetate) 5,000 U.S.P. Units • Vitamin D 500 U.S.P. Units • Vitamin B₁₂ with AUTRINIC[®] Intrinsic Factor Concentrate 1/15 U.S.P. Unit (Oral) • Thiamine Mononitrate (B₁) 5 mg. • Riboflavin (B₂) 5 mg. • Niacinamide 15 mg. • Pyridoxine HCl (B₆) 0.5 mg. • Calcium Pantothenate 5 mg. • Choline Bitartrate 25 mg. • Inositol 25 mg. • Ascorbic Acid (C) as Calcium Ascorbate

50 mg. • L-Lysine Monohydrochloride 25 mg. • Vitamin E (Tocopherol Acid Succinate) 10 Int. Units • Rutin 12.5 mg. • Ferrous Fumarate (Elemental Iron, 10 mg.) 30.4 mg. • Iodine (as KI) 0.1 mg. • Calcium (as CaHPO₄) 35 mg. • Phosphorus (as CaHPO₄) 27 mg. • Fluorine (as CaF₂) 0.1 mg. • Copper (as CuO) 1 mg. • Potassium (as K₂SO₄) 5 mg. • Manganese (as MnO₂) 1 mg. • Zinc (as ZnO) 0.5 mg. • Magnesium (MgO) 1 mg. • Boron (as Na₂B₄O₇·10H₂O) 0.1 mg. Bottles of 100, 1000.

LEDERLE LABORATORIES, a Division of AMERICAN CYANAMID COMPANY, Pearl River, New York





New from Upjohn... a base that approximates normal skin oils

Veriderm, developed by Upjohn research, is a unique dermatologic medium; both qualitatively and quantitatively, it parallels the oily constituents found in normal human skin. Veriderm Medrol is designed specifically to enhance steroid dispersion and effectiveness. Less greasy than ointments, less drying than lotions, Veriderm Medrol corrects dry skin conditions associated with many dermatoses.

The outstanding effectiveness of Medrol, the active agent, elicits prompt and often dramatic response in neurodermatitis, contact dermatitis, anogenital pruritus, atopic dermatitis, seborrheic dermatitis.

Available in four formulations:

Veriderm Medrol Acetate

0.25% — Each gram contains:
Medrol (methylprednisolone) Acetate (0.25%) 2.5 mg.
Methylparaben 4 mg.
Butyl-p-hydroxybenzoate 3 mg.

1% — Each gram contains:
Medrol (methylprednisolone) Acetate (1%) 10 mg.
Methylparaben 4 mg.
Butyl-p-hydroxybenzoate 3 mg.

For secondarily infected dermatoses

Veriderm Neo-Medrol Acetate

0.25% — Each gram contains:
Medrol (methylprednisolone) Acetate (0.25%) 2.5 mg.
Neomycin Sulfate 5 mg.
(equivalent to 3.5 mg. neomycin base)
Methylparaben 4 mg.
Butyl-p-hydroxybenzoate 3 mg.

1% — Each gram contains:
Medrol (methylprednisolone) Acetate (1%) 10 mg.
Neomycin Sulfate 5 mg.
(equivalent to 3.5 mg. neomycin base)
Methylparaben 4 mg.
Butyl-p-hydroxybenzoate 3 mg.

*Trademark †Trademark, Reg. U. S. Pat. Off. — methylprednisolone, Upjohn

The Upjohn Company, Kalamazoo, Michigan


in 5 Gm. tubes

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Veriderm* Medrol†

the corticosteroid that hits
the disease, but spares the patient.





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JUST ONE TABLET
A DAY
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**BECAUSE...JUST ONE TABLET MAINTAINS EFFECTIVE
SULFA ACTIVITY FOR 24 HOURS**

(sulfamethoxypyridazine, Parke-Davis)
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When sulfa therapy is indicated, long-acting single-dose MIDICEL affords many significant clinical advantages: **ECONOMY AND CONVENIENCE**—1-tablet-a-day regimen reduces possibility of omitted doses, lets the patient sleep through the night. **ENHANCED EFFECTIVENESS**—rapid absorption together with slow excretion assures dependable bacteriostasis in urinary tract infections, certain respiratory infections, bacillary dysenteries, as well as surgical and soft tissue infections caused by sulfonamide-sensitive organisms. **WELL TOLERATED**—low dosage and high solubility minimize possibility of crystalluria.

Adult dosage: Initial (first day)—2 tablets (1 Gm.) for mild or moderate infections, or 4 tablets (2 Gm.) for severe infections. Maintenance—usually 1 tablet (0.5 Gm.) daily. **Children's dosage:** According to weight. See literature for details of dosage and administration. **Available:** Quarter-scored tablets of 0.5 Gm., bottles of 24, 100 and 1,000.

and for children... MIDICEL ACETYL SUSPENSION (N¹ acetyl sulfamethoxypyridazine, Parke-Davis) tempting butterscotch flavor and, of course, only one dose a day. **Children's dosage:** According to weight. **Available:** 250 mg. per 5 cc., in 4-oz. bottles.

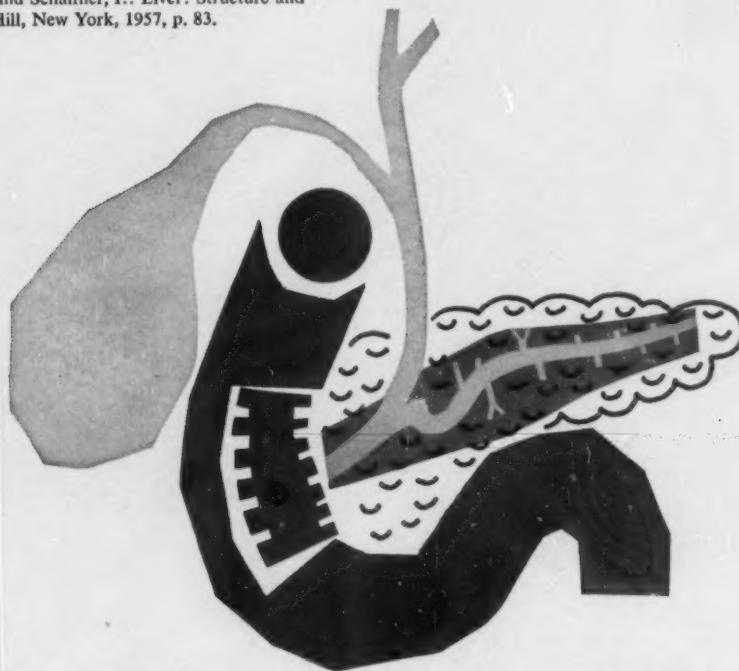
AN AMES CLINIQUICK®

CLINICAL BRIEFS FOR MODERN PRACTICE

how does diet affect the production of bile?

High-protein diets produce the greatest bile flow. Fat is a weaker choleretic than protein, and carbohydrates are without choleretic effect.

Source: Popper, H., and Schaffner, F.: *Liver: Structure and Function*, McGraw-Hill, New York, 1957, p. 83.



when thin, free-flowing bile is desired... DECHOLIN®

(dehydrocholic acid, AMES)

in biliary infection—"...a copious thin bile facilitates the flushing of the ducts."*

in postoperative management—"After relief of biliary obstruction, acceleration of bile formation, for which administration of bile acids has been suggested, may be desirable."*

Available: DECHOLIN tablets: (dehydrocholic acid, AMES) 3¼ gr. (250 mg.).
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and when spasmolysis is also needed...

DECHOLIN® WITH BELLADONNA

(dehydrocholic acid with belladonna, AMES)

for functional distress of the gastrointestinal tract—especially in geriatrics

Available: DECHOLIN/Belladonna tablets: DECHOLIN (dehydrocholic acid, AMES), 3¼ gr. (250 mg.), and extract of belladonna ½ gr. (10 mg.). Bottles of 100 and 500.

*Popper, H., and Schaffner, F.: *op. cit.*, p. 84.

84660



MEDICAL TIMES

Shigellosis Treated with Furazolidone

From Egypt, the authors submit a report on the study of shigellosis when treated with furazolidone (Furoxone). Forty-seven patients with a clinical diagnosis of shigellosis made up the group studied; however, in ten of the group therapy was delayed for one week. Complete laboratory examinations were made. The patients received 100 mg. of Furoxone four times daily for seven days. The duration of diarrhea following the beginning of therapy was 2.3 days. The consistency of the stools had returned to normal by the end of the fourth day of treatment. With one exception, stool cultures had become negative for *Shigella* by the end of the fourth day of therapy. The second phase of the study was undertaken to compare the course of the disease in treated and untreated patients. The double-blind technique was employed. By the fifth day of hospitalization, the furazolidone-treated patients were free of diarrhea, whereas nearly half of the control patients continued to have diarrhea. There were no abnormal findings in the blood counts,

urinalyses, or blood sugars that could be attributed to furazolidone therapy. There were no neurologic, toxic, or other undesirable effects from the drug. All *Shigella* isolated were sensitive in vitro to furazolidone. No changes in sensitivity were observed during or after treatment. This clinical trial indicates that furazolidone is efficacious in the treatment of acute shigellosis. It significantly reduces the duration and severity of the diarrhea and effects bacteriologic cure comparable to results obtained with other agents to which resistant strains have appeared. The absence of toxic or side-effects gives furazolidone an advantage not possessed by the other drugs currently in use.

M. E. MUSGRAVE and H. G. ARM,
U.S. NAVAL MEDICAL RESEARCH UNIT #3, CAIRO
Antibiotic Med. & Clin. Ther. (1960)
Vol. 7, No. 1, P. 17

Nylidrin Hydrochloride Evaluated

Nylidrin hydrochloride (Arlidin) was studied to discover its cerebral vasodilatory properties. The drug is a synthetic epinephrine-like compound which has been used extensively in the treatment of peripheral vascular disease. Patients in the tests, for the most part, had overt cerebral vascular disease, although several normal persons were included. After initial measurements of cerebral blood flow and metabolism were made, the administration of nylidrin orally was begun. A dosage of 12 mg. three times daily was subsequently increased to 18 mg. three times daily. After a period of treatment of more than seven days, the measurements were repeated, 18 mg. of nylidrin being given thirty minutes prior to the second determination. It was found that more consistent changes were obtained when patients were treated for two weeks or longer. In patients receiving short-term treatment, nylidrin had a variable effect on the cerebral blood flow although there was a tendency toward an increase; in individuals having been treated for longer periods there was a 43-percent increase. Cerebral vascular resistance was not significantly altered by

Continued on the following page



"When did you decide to specialize in proctology?"

treatment in the short-term group, but there was a significant decrease in resistance in the long-term group. Results of the study indicate that the oral administration of nyldrin hydrochloride was, in most instances, associated with an increase in cerebral blood flow, which, in turn, was accompanied by a decline in cerebral vascular resistance. There were no apparent side-effects, and no ill-effects when the medication was abruptly discontinued.

SEYMOUR EISENBERG, M.D.
Am. J. of Med. Sc. (1960) Vol. 240,
 No. 1, P. 119

Promethazine as a Local Anesthetic

The utilization of antihistaminic drugs as analgesics has not received popular acclaim even though this characteristic of them has been known since 1947. One of the authors has used promethazine for several years as a local anesthetic for patients known to be intolerant to procaine or other members of the "caine" group without untoward reactions. More recently, promethazine was used in 30 minor surgical interventions, injected subcutaneously in concentrations ranging from 1.25 per cent to 2.5 per cent and in amounts of

0.5 to 2.0 ml, the procedures being: biopsies, using scalpel and suturing, also circular punch biopsies; excision of cutaneous tumors — basal-cell carcinomas, keratocanthomas, and a malignant melanoma; electrosurgery including radical excision of basal-cell tumor with loop, desiccation of warts and keratoses, and coagulation of xanthomas on the eyelids. Satisfactory anesthesia was obtained in all patients when 2.5 percent solutions were used, including those procedures requiring complete anesthesia. Patients sensitive to other agents tolerated promethazine without untoward reactions. Injections should be given subcutaneously since intradermal application causes necrosis.

FREDERICK KALZ, M.D.
 AND ZOLTAN FEKETE, M.D.
Canad. Med. Assn. J. (1960) Vol. 82, No. 16, P. 833

Dithiazanine Used in a Mental Hospital

Twenty-four patients known to be infected with whipworms were designated for a controlled trial: half of the group served as controls, the others were treated with dithiazanine (Telmid tablets). The dosage was 200 mg. three times daily for five days. In view of the possible association between vomiting and failed treatment, an additional 200-mg. dose was given for every dose interval when vomiting occurred. Pretreatment egg counts were carried out. From the first day of treatment, all fecal specimens were watched carefully for adult whipworms for a period of ten days. Thereafter, one specimen was examined weekly for three weeks. As a result of treatment, only one patient was not rendered negative according to the fecal egg count. Adult worms were recovered from all patients in the treatment group, but none from patients in the control group. The whipworms were discovered between the third and sixth days of treatment; on the third day, threadworms were seen in specimens from six patients. Vomiting, the only significant complication, occurred in seven patients. At the close of the controlled-trial

Concluded on page 168a

MEDICAL TEASERS

Answer to puzzle on page 43a

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| P | H | A | S | E | S | O | L | T | A | L | C |
| A | L | A | R | L | U | E | R | A | L | L | O |
| M | A | L | A | B | L | E | A | C | G | A | S |
| O | T | W | H | O | A | T | I | N | A | N | T |
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| S | T | A | V | E | S | O | D | A | T | O | O |
| T | E | L | E | | S | A | L | L | E | M | O |



After a history and a physical ruled out organic disease, the physician diagnosed the case as recurring states of anxiety. To relieve these symptoms for this busy, on-the-go housewife, he prescribes Meprospan-400, the *only* meprobamate in *sustained-release* form.



As directed, the patient takes one Meprospan-400 capsule at breakfast. Her symptoms of tension and nervousness are soon relieved, and she will not have to remember to take another capsule until dinnertime.



Calm and relaxed, the patient is no longer upset by the pressures and irritations met in everyday life, nor is she likely to be incapacitated by autonomic disturbances, drowsiness, ataxia or other untoward reactions.



Alert and attentive, the patient participates in a P.T.A. meeting, following her second capsule of Meprospan-400 taken with the evening meal. Meprospan-400 does not decrease her mental efficiency or interfere with her normal activities or behavior.



Peacefully asleep, the patient enjoys beneficial rest... Meprospan-400 has relieved the tensions that previously prevented sleep or kept her tossing and turning throughout the night.

most widely prescribed tranquilizer...
most convenient dosage form...

ONE CAPSULE LASTS 12 HOURS


Meprospan®-400

400 mg. MILTOWN® SUSTAINED-RELEASE CAPSULES

Usual dosage: One capsule at breakfast lasts all day, one capsule with evening meal lasts all night. **Supplied:** Meprospan-400, each blue-topped *sustained-release* capsule contains 400 mg. Miltown. **Also available:** Meprospan-200, each yellow-topped *sustained-release* capsule contains 200 mg. Miltown. **For children:** Capsules can be opened and the coated granules mixed with soft foods or liquids.

Both potencies in bottles of 30.

Samples and literature available on request.

 WALLACE LABORATORIES / Cranbury, N. J.

experiment, it was decided to extend the treatment program to the staff as well as to all patients. Of 82 patients found to be whipworm carriers, 81 responded to three courses of treatment, the remaining patient required four courses. Of the 56 staff members, four were found to be infected, but were rendered negative. At the time of reporting, after a lapse of many months, the hospital staff and patients were free from infestation.

D. H. D. PAINE, M. D., et al.
Brit. Med. J. (1960) No. 5175, P. 770

Citrus

The use of citrus as a therapeutic agent for the control of scurvy, which is common knowledge today, was recognized in a medical report of Woodall published in 1639. Lister, later in the same century, reported various treatments of scurvy, but believed the most successful rem-

edy to be lemons. However, it required the passage of one hundred years before an administrative order from the British Admiralty, that required the daily issuance of lemon or orange juice to all seamen, banished scurvy from the Royal Navy.

The earliest known record of the cultivation of citrus fruits was that set forth in a Chinese treatise dated 1178 A.D. Also, at an early period, citrus was known in western Asia and the Mediterranean regions of Europe. Columbus is credited with introducing the fruit to America on his second voyage. Early in the 1700s, oranges were cultivated in what is now Arizona, although they had been growing in Florida for over one hundred years. Later, the fruit was grown in California by the Monks at San Diego and San Gabriel, but the commercial groves of oranges and lemons did not appear until after 1840.

The theory of an antiscorbutic vitamin was postulated in 1911, but an antiscorbutic factor was first prepared from lemon juice by Zilva in 1924. Four years later, hexuronic acid, identified as vitamin C, was isolated and designated as the antiscorbutic factor. Vitamin P, more recently known as the bioflavonoids, constitutes a valuable adjunct to the numerous disease syndromes having capillary dysfunction.

Citrus in Medicine (1960), Vol. 1, No. 1, P. 1

A
logical
prescription for
overweight patients


anorectic-ataractic

BAMADEX

meprobamate 400 mg., with d-amphetamine sulfate 5 mg., Tablets

meprobamate plus d-amphetamine...
depresses appetite...elevates mood...
eases tensions of dieting...without over-
stimulation, insomnia or barbiturate
hangover.

Dosage: One tablet one-half to one hour before each meal.



Progressive Lenticular Degeneration Without Liver Damage

A girl, who died at the age of 9 years and 3 months, had the morphological changes of "Wilson's disease" in the central nervous system without hepatic cirrhosis. Copper metabolism was not disturbed but aminoaciduria was present. She had no Kayser-Fleischer ring. This case cannot be grouped with Wilson's disease as biochemically defined at present.

E. J. FIELD, M.D., A. J. WORT, M.B.,
and E. ELLIS, M.D.

The Lancet (1960), No. 7125, Pp. 625-628



for your OB patients
new! improved super-smooth coated tablets
with prompt disintegration

Natalins[®] tablets

comprehensive vitamin-mineral support, pre- and post-natal

formerly Natalins Comprehensive

Developed and perfected by Mead Johnson research, the new super-smooth coating of Natalins tablets makes them even easier to swallow, even more appealing to your OB patients. And there is no interference with prompt disintegration—so important for assured vitamin protection. Natalins tablets provide generous amounts of iron, calcium, vitamin C, plus eight other significant vitamins for the increased needs of multiparas.

Convenient one-tablet-a-day dosage...
attractive new amber bottle.

If you prefer a less comprehensive formulation, specify Natalins[®] Basic tablets... four basic vitamins and minerals.

For easier specification, there are now only two Natalins formulations: Natalins tablets and Natalins Basic tablets. Natalins capsules, Natalins-T capsules and Natalins-PF capsules have been discontinued.

23180



Mead Johnson
Symbol of service in medicine



RELATM

CARISOPRODOL

RELAXES, EASES
ACUTE MUSCLE
SPASM & PAIN

NO SPRAIN
NO STRAIN



**NO LOW
BACK
PAIN**

**RELA achieves the necessary interrup-
tion of the spasm/pain cycle through
its unique twofold myogestic^x action.**

**RELA restores mobility by relieving
stiffness, pain and spasm.**

Bibliography: 1. Ostrowski, J. P.: *Orthopedics* 2:7 (Jan.) 1960.
2. Kestler, O. C.: *J. A. M. A.* 171:2039 (April 30) 1960. 3. Frankel,
K.: Paper presented at Scientific Meeting, New York State
Society of Industrial Medicine, Inc., New York, Sept. 30, 1959.

Schering

**x MYOGESIC: MUSCLE RELAXANT
ANALGESIC**



NEWS AND NOTES

Selected items of current interest from the fields of medical research and education.

Revenue Service Approves MD Pension Plans

Two groups of physicians in Illinois recently accomplished something which most tax experts have labeled "impossible." These doctors set up organizations resembling corporations and created tax-saving pension plans for themselves which were approved by a District Director of the Internal Revenue Service.

And how did they do it? By employing a

method devised by business men. In some lines of business it's possible for the owner to incorporate and become an "employee" (stockholder-executive) of the corporation. As an employee the owner can share in the company's pension or profit-sharing plan.

As long as the plan is found qualified by Internal Revenue, contributions to it are *currently* deductible, the plan's income isn't taxed, and the employee doesn't pay any taxes on the money until it is actually in his hands (when he retires or leaves the company for some other reason).

The advantage of this type of financial setup is readily apparent. Instead of being taxed on *all* of his income, the self-employed physician can set some income aside *before* taxes; when he receives the money from the fund he will undoubtedly be in a much lower tax bracket and thus a smaller bite will be taken by Internal Revenue.

The big hurdle for physicians is to create organizations resembling corporations which will stand up legally. Some tax experts doubt that this can be done in states which have adopted the Uniform Partnership Act.

In order for an organization or group to be taxed as a corporation, it must look and act like a corporation. Some of the characteristics of a corporation are: continuity of life; associates; a business objective, with a division of profits; limited liability; free transferability of interests.

Continued on page 176a

anorectic-ataractic

BAMADEX


meprobamate 400 mg., with d-amphetamine sulfate 5 mg., Tablets

FOR THERAPY
OF OVERWEIGHT PATIENTS

- d-amphetamine depresses appetite and elevates mood
- meprobamate eases tensions of dieting (yet without overstimulation, insomnia or barbiturate hangover).

Dosage: One tablet one-half to one hour before each meal.

A LOGICAL COMBINATION
IN
APPETITE CONTROL



"R Day"

*for the neuritis patient
can be tomorrow*

"R Day"—when pain is relieved—can come early for patients with inflammatory (non-traumatic) neuritis if treatment with Protamide is started promptly after onset.

Protamide is the therapy of choice for either early or delayed treatment, but early use assures greatest efficacy.

For example, in a 4-year study¹ and a 26-month study² a combined total of 374 neuritis patients treated with Protamide during the first week of symptoms responded as follows:

60% required only 1 or 2 daily injections for complete relief

96% experienced excellent or good results with 5 or less injections

Thus, the neuritis patient's first visit—especially an early one—affords the opportunity to speed his personal "R Day."

Protamide is available at pharmacies and supply houses in boxes of ten 1.3 cc. ampuls. Intramuscularly only, one ampul daily.

PROTAMIDE®



Sherman Laboratories
Detroit 11, Michigan



1. Lehrer, H. W., et al.: Northwest Med. 75:1249, 1955.

2. Smith, Richard T.: New York Med. 8:16, 1952.

Bone section: erosion
and purulent exudate



A large, dark, grainy microscopic image of bacteria, likely staphylococci, filling the left half of the advertisement. The bacteria appear as numerous small, dark, irregular clusters and individual cells.

in osteomyelitis

Therapeutic confidence

Panalba is effective against more than 30 commonly encountered pathogens including ubiquitous staphylococci. Right from the start, prescribing it gives you a high degree of assurance of obtaining the desired anti-infective action in this as in a wide variety of bacterial diseases.

Supplied: Capsules, each containing Panmycin* Phosphate (tetracycline phosphate complex), equivalent to 250 mg. tetracycline hydrochloride, and 125 mg. Albamycin,* as novobiocin sodium, in bottles of 16 and 100.

*Trademark, Reg. U. S. Pat. Off.

The Upjohn Company
Kalamazoo, Michigan

Upjohn

Panalba*

your broad-spectrum
antibiotic of *first resort*





**IN CHRONIC BRONCHITIS,
CHRONIC ASTHMA AND EMPHYSEMA**

HIGHER THEOPHYLLINE BLOOD LEVELS MORE EFFECTIVE BRONCHODILATATION

less gastric distress—for uncomplicated therapy

Choledyl produces far less gastrointestinal irritation than oral aminophylline. In a study of 200 geriatric patients chronically ill with pulmonary emphysema, bronchitis and asthma, Choledyl was found to be "extremely well tolerated."^{*}

greater solubility—for enhanced theophylline blood levels

Up to 75% higher theophylline blood levels than oral aminophylline—provides superior bronchodilatation: relieves bronchospasm—reduces coughing and wheezing—increases vital capacity—reduces incidence and severity of acute attacks—decreases need for secondary medication.

^{*}Simon, S. W.: *Ann. Allergy* 14:172-180 (March-April) 1956.

CHOLEDYL®
the choline salt of theophylline brand of oxtriphylline

*better breathing...
decreases wheezing*



SPD:8

176a

NEWS AND NOTES—Continued

Organizations which have a sufficient number of these characteristics will be treated as corporations rather than partnerships.

The two groups of Illinois physicians set up "associations" which have most of the characteristics of corporations. They then "employed" themselves and set up pension plans. Finally, they submitted the plans to the Director of Internal Revenue at Springfield, Illinois.

The District Director's precedent-shattering decision was that in his opinion the plans met the requirements of the law.

Dr. Francis P. Corrigan

Dr. Francis P. Corrigan, New York City, was recently honored at a luncheon. The Doctor has been active in the United States diplomatic service, and is the president of the Latin American Foundation which has been responsible for securing postgraduate medical training for Latin American doctors.

Dr. Eugene P. Kennedy

Dr. Eugene P. Kennedy, former Professor of Biological Chemistry at the University of Chicago, and now serving as a Senior Post-doctoral Fellow of the National Science Foundation at Oxford University, has been appointed Head of the Department of Biological Chemistry at Harvard Medical School. For a number of years, the Doctor has been interested in the investigation of fat metabolism. With his collaborators, he worked out in detail the complex scheme of reactions by which the phospholipid, lethicin, is provided in the living cell, and has been able to duplicate these reactions in the test-tube. In connection with the biosynthesis of lethicin, he identified the agent, cytidine triphosphate, and later demonstrated that the cytidine compounds are of great importance in fat metabolism. Dr. Kennedy's work has had a profound impact on the field of biological chemistry.

Continued on page 178a

MEDICAL TIMES

on the pathogenesis of pyelonephritis:

"An inflammatory reaction here [renal papillae] may produce sudden rapid impairment of renal function. One duct of Bellini probably drains more than 5000 nephrons. It is easy to see why a small abscess or edema in this area may occlude a portion of the papilla or the collecting ducts and may produce a functional impairment far in excess of that encountered in much larger lesions in the cortex."¹

The "exquisite sensitivity"² of the medulla to infection (as compared with the cortex), highlights the importance of obstruction to the urine flow in the pathogenesis of pyelonephritis. "There is good cause to support the belief that many, perhaps most, cases of human pyelonephritis are the result of infection which reaches the kidney from the lower urinary tract."³



to eradicate the pathogens no matter the pathway

FURADANTIN[®]

brand of nitrofurantoin

High urinary concentration • Glomerular filtration plus tubular excretion • Rapid antibacterial action • Broad bactericidal spectrum • Free from resistance problems • Well tolerated—even after prolonged use • No cross resistance or cross sensitization with other drugs

Average Furadantin Adult Dosage: 100 mg. tablet q.i.d. with meals and with food or milk on retiring. *Supplied:* Tablets, 50 and 100 mg.; Oral Suspension, 25 mg. per 5 cc. tsp.

References: 1. Schreiner, G. E.: A.M.A. Arch. Int. M. 102:32, 1958. 2. Freedman, L. R., and Beeson, P. B.: Yale J. Biol. & Med. 30:406, 1958. 3. Rocha, H., et al.: Yale J. Biol. & Med. 30:341, 1958.



NITROFURANS—a unique class of antimicrobials

EATON LABORATORIES, DIVISION OF THE NORWICH PHARMACAL COMPANY, NORWICH, N. Y.

BAMADEX A logical combination for appetite suppression


meprobamate plus d-amphetamine... suppresses appetite... elevates mood... reduces tension... without insomnia, overstimulation or barbiturate hangover.

anorectic-ataractic

Dosage: One tablet one-half to one hour before each meal.



SULPHO-LAC



The Balanced Acne Therapy

MANUFACTURED BY
KELGY LABORATORIES
NEW YORK 35, N. Y.

NEWS AND NOTES—Continued

Miami Meeting

The American Association for the Study of Headache was organized this Summer at the time of the Annual A.M.A. meeting in Miami. The following officers were elected: President, Henry D. Ogden, New Orleans, Louisiana; Vice-President, Walter C. Alvarez, Chicago, Illinois; Treasurer, Robert E. Ryan, St. Louis, Missouri; Secretary, Bayard T. Horton, Rochester, Minnesota; Moderator, George T. Waldbott, Detroit, Michigan.

The Association welcomes to its membership any physician—specialist, or general practitioner—who is interested in the study of headache. Further information can be obtained from the Secretary, Doctor Bayard Horton, Mayo Clinic, Rochester, Minnesota.

Dr. Ralph Bowen, Jr.

Dr. Ralph Bowen, Jr., fellow in plastic surgery, Mayo Clinic, has left for Nairobi, Kenya, East Africa where he will spend a year working under the sponsorship of the African Research Foundation and MEDICO. At present, the heavily populated Nairobi area, where cancer of the skin is particularly prevalent, has only one plastic surgeon. Dr. Bowen will carry on cancer research and will be the only physician attached to a newly created mobile medical unit.

Tolbutamide Offers Hope for MS Victims

Dr. Glen Thomas Sawyer, Division of Neurology, University of Minnesota Medical School, made a preliminary report on the effects of tolbutamide on multiple sclerosis in the current J.A.M.A.

Dr. Sawyer said with six of his seven patients, an inactive substance (placebo) was given alternately with the drug. In addition, most of the patients were alternated between a regular high-carbohydrate diet and a low-carbohydrate diet. Carbohydrates are sugars,

Continued on page 184a

when you see impetigo....

*Rx Chymar Ointment
Disp: 5 Gm. tube
Sig: apply as directed*


Results are "... best in lesions exhibiting areas of chronic crusting and scale formation in addition to infection and inflammation." Therefore, "in the superficial infections, such as impetigo, Chymar Ointment was eminently effective."²


© 1960, A. P. Co.

CHYMAR® OINTMENT

Each gram contains 1.25 mg. of Hydrocortamate HCl; 3.5 mg. of Neomycin Palmitate (as base); and 10,000 Armour Units of Proteolytic Activity (as provided by a concentrate of proteolytic enzymes from pancreas, e.g. chymotrypsin and trypsin); in a water-miscible ointment base.

S. Levine, A. J.; Beck, C.; Davis, O. F., and Horwitz, R.: Antibiotic Med. & Clin. Therap. 6:545, 1959. S. Cornblat, T., and Chesrow, E. J.: Arch. Dermat., to be published, 1960.

 **ARMOUR PHARMACEUTICAL COMPANY** • KANKAKEE, ILLINOIS • *Armour Means Protection*



Put your low-back patient back on the payroll

*Soma's prompt relief of pain and stiffness can
get your low-back patients back to
work in days instead of weeks*

Soma is unique because it combines the properties of an effective muscle relaxant and an independent analgesic in a *single drug*. Unlike most other muscle relaxants, which can only relax muscle tension, Soma attacks both phases of the pain-spasm cycle at the same time.

Thus with Soma, you can break up both

pain and spasm fast, effectively . . . help give your patient the two things he wants most: relief from pain and rapid return to full activity.

Soma is notably safe. Side effects are rare. Drowsiness may occur, but usually only with higher dosages. Soma is available in 350 mg. tablets. Usual dosage is 1 tablet q.i.d.

The muscle relaxant with an independent pain-relieving action

SOMA[®]

(carisoprodol, Wallace)

 Wallace Laboratories, Cranbury, New Jersey



**How you can help save
your patients a month's pay**

Kestler reports in J.A.M.A. (April 30, 1960) that conventionally treated low-back syndrome patients required an average of 41 days for full recovery (range: 3 to 90 days). The addition of Soma therapy in this comparative investigation reduced the average to 11.5 days (range: 2 to 21 days). With Soma, patients averaged full recovery 30 days sooner.

4 essential actions in a single tablet ● to simplify treatment of the hypertensive complex



CENTRAL ACTION OF SER-AP-ES:

SER-AP-ES acts centrally to inhibit or block the outflow of sympathetic vasopressor substances. In addition, Ser-Ap-Es improves cerebral vascular tone.

SERPASIL® (reserpine CIBA)

APRESOLINE® hydrochloride (hydralazine hydrochloride CIBA)

ESIDRIX® (hydrochlorothiazide CIBA)



RENAL ACTION OF SER-AP-ES:

Ser-Ap-Es increases renal blood flow, thereby halting or reversing the ischemic process in advancing hypertension. The increase in urine volume and sodium and chloride excretion which occurs with Ser-Ap-Es therapy also benefits the hypertensive patient.

2/ 500000

● Ser-Ap-Es

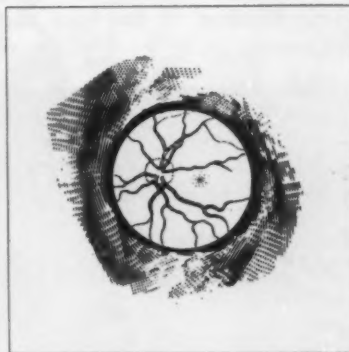
(Serpasil® + Apresoline® + Esidrix®)

Inclusive single-tablet antihypertensive



CARDIAC ACTION OF SER-AP-ES:

Ser-Ap-Es has a beneficial effect on the hypertensive heart; diastole is prolonged, and there is a decrease in both heart rate and cardiac output—which combine to ease the strain on the over-worked myocardium.



VASCULAR ACTION OF SER-AP-ES:

Ser-Ap-Es opposes the action of pressor substances on the vasculature. In addition, Ser-Ap-Es makes the vasculature less responsive to circulating vasopressor amines and more responsive to the antipressor components of the combination tablet.

Supplied: SER-AP-ES Tablets, each containing 0.1 mg. Serpasil, 25 mg. Apresoline hydrochloride, and 15 mg. Esidrix.

Complete information sent on request.

CIBA
SUMMIT • NEW JERSEY

starches, celluloses, and gums.

"Definite improvement in symptoms and signs was seen in all patients under tolbutamide treatment except when a high-carbohydrate diet was suddenly started," he reported.

"Deterioration was always seen when placebo capsules were substituted for the tolbutamide. A low-carbohydrate diet yielded favorable and a high-carbohydrate diet unfavorable results in most patients."

Some researchers have suggested that MS may be primarily a disorder of carbohydrate metabolism, he pointed out.

Tolbutamide, introduced in 1957, is an agent for lowering the blood sugar level. It is widely used in treating mild diabetes mellitus, a disorder of the metabolism resulting in a high level of sugar in the blood. Recently the drug has been useful in treating acne and Parkinson's

disease, another disorder of the nervous system.

It was the successful remission of acne and the symptoms of multiple sclerosis in a patient given the drug for acne that prompted Dr. Sawyer to prescribe the drug for six other patients.

One of the patients treated by Dr. Sawyer was a 22-year-old man whose muscular coordination had degenerated to a point where he was just able to transfer between wheelchair and bed. He also suffered dizziness, double vision, and severe numbness of the hands and feet. Following therapy, all symptoms disappeared except for a slight unsteadiness when attempting to walk rapidly.

Dr. Sawyer said a study of tolbutamide therapy among a larger number of MS patients has been started.

Continued on page 186a

spray on the bandage with **AEROPLAST**[®] plastic spray-on dressing brand of vibesate¹

Aeroplast Dressing, sprayed directly on the lesion, forms a flexible bandage of transparent, plastic film. Sterile as applied . . . excludes bacteria . . . especially useful in "hard-to-bandage" places . . . waterproof . . . healing is not retarded.

For lacerations, abrasions, scalp wounds, superficial skin distress (insect bites, sunburn, chafing, etc.)

Convenient 3 oz. size
for your treatment table

Available at your
prescription pharmacy or
surgical supply dealer.
Also 6 oz. and 12 oz.

AEROPLAST CORPORATION, 420 Dellrose Avenue, Dayton, Ohio

¹ New and Nonofficial Drugs, 1960, pp. 740-742.

Aeroplast Dressing—U.S. Pat. No. 2,804,073





a book is to look at



buttons are to keep people warm



cats are so you can have kittens



REDISOL is so kids have better appetites

Redisol (Cyanocobalamin, crystalline vitamin B₁₂) often stimulates children's appetites with consequent weight gain.

Tiny **Redisol Tablets** (25, 50, 100, 250 mcg.) dissolve instantly in the mouth, on food or in liquids.

Also available: cherry-flavored **Redisol Elixir** (5 mcg. per 5-cc. teaspoonful); **Redisol Injectable**, cyanocobalamin injection USP (30 and 100 mcg. per cc., 10-cc. vials and 1000 mcg. per cc. in 1, 5 and 10-cc. vials).

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For additional information, write Professional Services, Merck Sharp & Dohme, West Point, Pa.



MERCK SHARP & DOHME, DIVISION OF MERCK & CO., INC., PHILADELPHIA 1, PA.

(VOL. 88, NO. 12) DECEMBER 1960


REDISOL IS A TRADEMARK OF MERCK & CO., INC.

185a

HYPERTUSSIS®
 pertussis immune globulin
 derived from adult venous blood
in whooping cough...
 shortens the course, lessens the
 severity, reduces the rate of com-
 plications. Also for prophylaxis.
 Available in one dose 1½ cc. vial.

CUTTER
A Leader in Human Blood Fractions Research

Polio IMMUNE GLOBULIN
 gamma globulin
 derived from adult venous blood
modifies or prevents measles
 Available in 2 cc. and 10 cc. vials.
 For further information see PDR page
 664, Ask Your Cutter Man,
 or write to Dept. O-10M
CUTTER LABORATORIES
 Berkeley, California



**A LOGICAL ADJUNCT TO THE
 WEIGHT-REDUCING REGIMEN**


meprobamate plus d-amphetamine...
 reduces appetite...elevates mood...eases
 tensions of dieting...**without** overstimula-
 tion, insomnia or barbiturate hangover.

Dosage: One tablet one-half to one hour before each meal.

anorectic-ataractic

BAMADEX®

meprobamate 400 mg., with d-amphetamine sulfate 5 mg., Tablets



Unique Science Film Available

A film showing the destruction of living human cells by virus invasion is available to medical groups without charge, according to an announcement by the Doho Chemical Corporation.

The work of Italian researchers, the film "makes visible to the naked eye the reproduction of viral bodies. ECHO (APC strain) and poliomyelitis virus are the infecting materials and human liver and kidney cells, respectively, are the hosts."

Titled "Virus to Mr. Virus," the picture is in color and sound, with English narration. It is available to medical societies, hospitals, universities and professional study groups of 20 or more. Further information can be obtained by writing the Doho Chemical Corp., 100 Varick St., New York 13, N. Y.

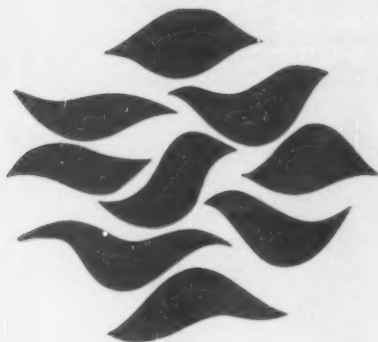
Award to University of Kansas

The University of Kansas Medical Center, Kansas City, Kansas, has been given a \$400,000 contract by the U.S. Public Health Service to study agents that may identify viruses causing cancer. The Kansas group is one of 100 such research teams working on the National Cancer Institute's virology programs.

Cervical Cancer Tests

A 14-month program to carry out tests for cervical cancer among women treated at Harlem and Metropolitan city hospitals was announced by the New York departments of health and hospitals. The Papanicolaou smear test is to be given to approximately 75,000 women. Private physicians in Harlem will be asked to take similar tests of their patients. Harlem was chosen because of the high incidence of the disease there as compared with other sections of the city. The U.S. Public Health Service is contributing \$99,800 toward the anticipated cost of \$247,000.

Concluded on page 192a



in nine years Novahistine hasn't cured a single cold...but it has been prescribed
for relief of symptoms
in over 10,000,000 patients*



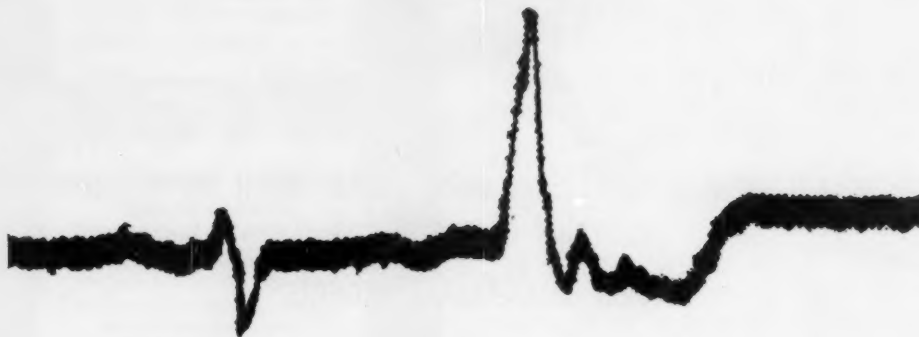
Novahistine LP tablets begin releasing medication promptly and continue bringing relief for 8 to 12 hours. Two Novahistine LP tablets in the morning and two in the evening will effectively control the average patient's discomfort from a cold. Each tablet contains 25 mg. phenylephrine HCl and 4 mg. chlorphenpyridamine maleate.

*Based on National Prescription Audits of new Novahistine prescriptions since 1952.



PITMAN-MOORE COMPANY DIVISION OF ALLIED LABORATORIES, INC., INDIANAPOLIS 6, INDIANA

Novahistine[®] LP
LONG ACTING



for cardiac arrhythmias...obvious advantages

PRONESTYL[®] HYDROCHLORIDE

SQUIBB PROCAINE AMIDE HYDROCHLORIDE

Pronestyl offers obvious advantages over quinidine and procaine in the management of cardiac arrhythmias: "Procaine amide [Pronestyl] should be the drug of choice in arrhythmias of ventricular origin."¹—on oral administration, side effects are less marked than with quinidine—administered I. V., Pronestyl is safer than a corresponding I. V. dose of quinidine—administered I. M., Pronestyl acts faster than I. M. quinidine²—Pronestyl sometimes stops arrhythmias which have not responded to quinidine^{3,4}—Pronestyl may be used in patients sensitive to quinidine—more prolonged action, less toxicity, less hypotensive effect than procaine—no CNS stimulation such as procaine may produce.

Supply: For convenient oral administration: Capsules, 0.25 gm., in bottles of 100.

For I. M. and I. V. administration: Parenteral Solution, 100 mg. per cc., in vials of 10 cc.

References: 1. Zapata-Diaz, J., et al.: Am. Heart J. 43:854, 1952. 2. Modell, W.: In *Drugs of Choice*, C.V. Mosby Co., St. Louis, 1958, p. 454.

3. Kayden, H. J., et al.: Mod. Concepts Cardiovasc. Dis. 20:100, 1951. 4. Miller, H., et al.: J.A.M.A. 146:1004, 1951.

SQUIBB



Squibb Quality—the Priceless Ingredient

*PRONESTYL[®] IS A SQUIBB TRADEMARK

In depression

To restore emotional stability
during the declining years



Tofrānil

brand of imipramine hydrochloride

Thymoleptic

New for geriatric use

Tablets of 10 mg.

Recent studies^{1,2} strongly indicate underlying depression as a causative factor, and Tofrānil as an eminently successful agent, in restoring the difficult geriatric patient to a more contented frame of mind and more manageable disposition.

1. Cameron, E.: The Use of Tofrānil in the Aged, *Canad. Psychiat. A. J. Special Supplement*, **4**:S160, 1959.
2. Christe, P.: Indications for Tofrānil in Geriatrics, *Schweiz. med. Wchnschr.* **90**:586, 1960.
3. Schmied, J., and Ziegler, A.: Tofranil in Geriatrics, *Praxis* **49**:472, 1960.

Also Available:

For the treatment of non-geriatric depression: Tofrānil tablets of 25 mg. and ampuls of 25 mg. in 2 cc. solution.

 **Geigy**, Ardsley, New York

TO-451-60

7 per cent free



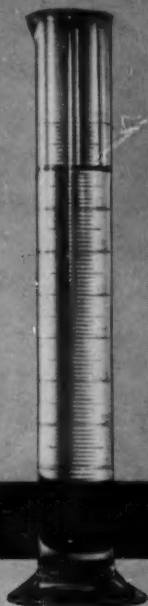
14 per cent acetylated



79 per cent glucuronide*



*Highly soluble yet retaining some antibacterial effectiveness



UNIQUE EXCRETION PATTERN MAKES MADRIBON SAFER



THE RATE OF MADRIBON EFFECTIVENESS IS HIGH

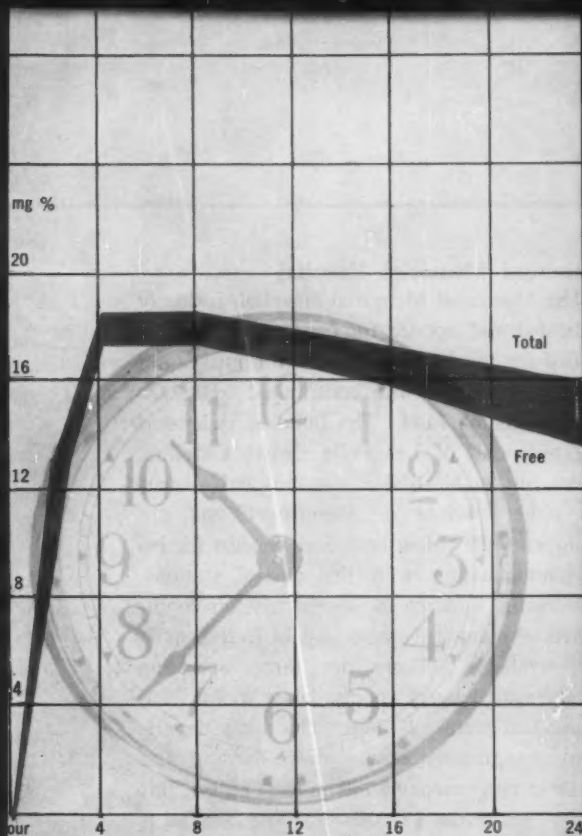
4 sound reasons to prescribe Madrison in respiratory tract infections

**Safe low-dosage sulfonamide,
backed by 86 published reports**

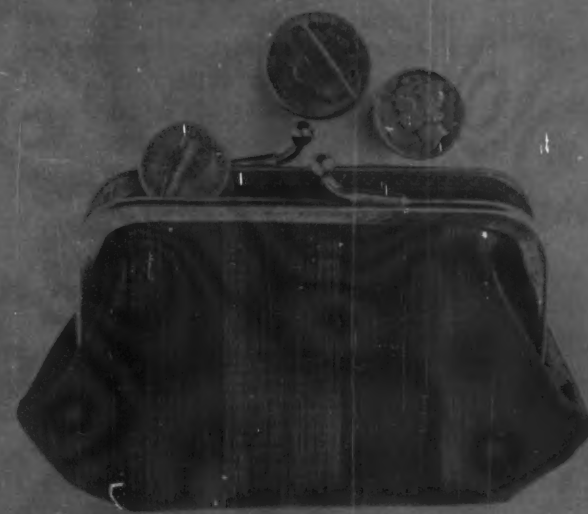
In extensive clinical studies, Madribon has accumulated an unexcelled safety record. The total incidence of side reactions with Madribon lies below 2 per cent; those that have occurred were generally mild and transitory.

Reported effectiveness of Madribon registers up to 90 per cent in a large variety of respiratory, urinary tract and soft tissue infections.

Reports and Conference Papers on Madribon: 1. R. J. Schnitzer, W. F. DeLorenzo, E. Grunberg and R. Russomanno, *Proc. Soc. Exper. Biol. & Med.*, 99:421, 1958. 2. E. H. Townsend, Jr. and A. Borgstedt, *Antibiotics Annual 1958-1959*, New York, Medical Encyclopedia, Inc., 1959, p. 64. 3. W. P. Boger, *ibid.*, p. 48. 4. S. Ross, J. R. Puig and E. A. Zaremba, *ibid.*, p. 56. 5. O. Brandman, C. Oyer and R. Engelberg, *J. M. Soc. New Jersey*, 56:24, 1959. 6. L. O. Randall, R. E. Bagdon and R. Engelberg, *Toxicol. & Appl. Pharmacol.*, 1:28, 1959. 7. B. Wolach, *Colorado GP*, 1:4, 1959. 8. B. Fust and E. Bochni, *Antibiotic Med. & Clin. Therapy*, 6: (Suppl. 1), 3, 1959. 9. W. F. DeLorenzo and A. M. Schumacher, *ibid.*, p. 11. 10. W. F. DeLorenzo and R. Russomanno, *ibid.*, p. 14. 11. R. J. Schnitzer and W. F. DeLorenzo, *ibid.*, p. 17. 12. B. A. Koehlin, W. Kern and R. Engelberg, *ibid.*, p. 22. 13. B. H. Leming, Jr., C. Flanagan, Jr. and B. R. Jennings, *ibid.*, p. 32. 14. H. P. Ironson and C. Patel, *ibid.*, p. 40. 15. W. A. Left, *ibid.*, p. 44. 16. J. F. Glenn, J. R. Johnson and J. H. Semans, *ibid.*, p. 49. 17. J. D. Young, Jr., W. S. Kiser and O. C. Beyer, *ibid.*, p. 53. 18. T. D. Michael, *ibid.*, p. 57. 19. J. C. Elia, *ibid.*, p. 61. 20. S. Guss and A. J. Spiro, *Pediatric Conferences*, 2:14, 1959. 21. R. E. Ray, *Case Rep. Child. Mem. Hosp., Chicago*, 17:4445, 1959. 22. O. Thalhammer (University Pediatric Clinic, Vienna, Austria), paper presented at the International Congress of Infectious Pathology, Milan, Italy, May 6-10, 1959. 23. R. Schuppli (Director, University Dermatological Clinic, Basle, Switzerland), *ibid.* 24. S. Rummelhardt (First University Surgical Clinic, Vienna, Austria), *ibid.* 25. M. Rinetti (Institute of Surgical Pathology, University of Parma, Italy), *ibid.* 26. M. Rentsch (University Pediatric Clinic, Berne, Switzerland), *ibid.* 27. N. Quattrin (Cardarelli Hospital, Naples, Italy), *ibid.* 28. E. Picha (First University Gynecological Clinic, Vienna, Austria), *ibid.* 29. R. Neimeier (University Gynecology Clinic, Basle, Switzerland), *ibid.* 30. G. Moustardier (Faculty of Medicine and St. Andrew's Hospital, Bordeaux, France), *ibid.* 31. S. T. Madsen (Bergen, Norway), *ibid.* 32. W. P. Boger, *ibid.* 33. P. Buenger (Medical Department, Heidelberg General Hospital, Langenhorn, Hamburg, Germany), *ibid.* 34. J. Leng-Levy, J. David-Chausse, P. Gibaud and J. Bottin, *J. méd. Bordeaux*, 136:713, 1959. 35. B. H. Leming, Jr. and C. Flanagan, Jr., Scientific Exhibit, Annual Meeting of the American Medical Association, Atlantic City, N. J., June 1959. 36. J. C. Elia, *ibid.* 37. M. J. Mosely, Jr., *J. Nat. M. A.*, 51:258, 1959. 38. H. Schoenfeld and W. Sommerfeld, *Aerzt. Wchnschr.*, 14:619, 1959. 39. H. Ptasnik, *Medizinische*, (31/32), 1437, 1959. 40. P. Rentchnick and J. Lagier, *Schweiz. med. Wchnschr.*, 89:894, 1959.



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41. R. E. Bagdon, L. O. Randall and W. A. Leff, *Ann. New York Acad. Sc.*, 82:(Art. 1), 3, 1959. 42. W. F. DeLorenzo and R. J. Schnitzer, *ibid.*, p. 10. 43. W. P. Boger and J. J. Gavin, *ibid.*, p. 18. 44. B. H. Leming, Jr. and C. Flanagan, Jr., *ibid.*, p. 31. 45. T. D. Michael, *ibid.*, p. 40. 46. S. M. Finegold, Z. Kudinoff, H. O. Kendall and V. E. Kvinge, *ibid.*, p. 44. 47. W. J. Grace, *ibid.*, p. 51. 48. J. C. Elia, *ibid.*, p. 52. 49. L. E. Skinner, *ibid.*, p. 57. 50. G. A. Moore, *ibid.*, p. 61. 51. C. W. Daeschner, *ibid.*, p. 64. 52. E. H. Townsend, Jr. and A. Borgstedt, *ibid.*, p. 71. 53. S. Krugman, *Discussant, ibid.*, p. 78. 54. S. W. Levy, *ibid.*, p. 80. 55. M. M. Cahn and E. J. Levy, *ibid.*, p. 84. 56. M. Sierp and J. W. Draper, *ibid.*, p. 92. 57. W. S. Kiser, O. C. Beyer and J. D. Young, *ibid.*, p. 105. 58. G. Carroll, *Discussant, ibid.*, p. 110. 59. H. L. Rosenthal and L. Jud, *J. Lab. & Clin. Med.*, 54:461, 1959. 60. A. E. Thill, *Pennsylvania M. J.*, 62:1534, 1959. 61. Council on Drugs, New and Nonofficial Drugs, *J.A.M.A.*, 171:1691, 1959. 62. T. Sakuma, C. W. Daeschner and E. M. Yow, *Am. J. M. Sc.*, 239:92, 1960. 63. J. W. Faulkner and A. F. Morrison, *J. Urol.*, 83:181, 1960. 64. H. Lieb, *Curr. Therap. Res.*, 2:66, 1960. 65. G. D. La Veck, F. de la Cruz and J. Kirschvink, *Antibiotic Med. & Clin. Therapy*, 7:119, 1960. 66. J. C. Elia, *Mil. Med.*, 125:258, 1960. 67. A. Lattimer, A. J. Simon and M. H. Lepper, *Am. J. M. Sc.*, 239:548, 1960. 68. J. C. Elia, *J. Internat. Coll. Surgeons*, 33:446, 1960. 69. R. J. Williams, R. Etienne, M. Cloyd, B. Randolph, J. Hoard and T. Reed, *Antibiotic Med. & Clin. Therapy*, 7:358, 1960. 70. N. Mulla, *Obst. & Gynec.*, 16:89, 1960. 71. B. Pinck, *J. Urol.*, 84:183, 1960. 72. J. C. Elia, *Eye Ear Nose & Throat Month.*, 39:504, 1960. 73. H. B. Barner, *Antibiotic Med. & Clin. Therapy*, 7:426, 1960. 74. J. P. Cappuccio and E. C. Dobbs, *J. Oral Surg.*, 18:230, 1960. 75. J. B. Christodouloupoulos and A. P. Klotz, *Am. J. Gastroenterol.*, 34:433, 1960. 76. L. Weinstein, *A.M.A. Arch. Indust. H.*, 21:487, 1960. 77. C. P. Katsampas and N. McNabb, *Antibiotic Med. & Clin. Therapy*, 7:574, 1960. 78. G. Nunnally, *J.A.M.A.*, 173:1020, 1960. 79. S. F. Horne, *M. Times*, in press. 80. L. H. Teitel, P. Chericho, L. L. Kay, P. A. Printz and S. Printz, *Curr. Therap. Res.*, 2:310, 1960. 81. M. M. Cahn and E. J. Levy, *Clin. Med.*, 7:2027, 1960. 82. B. W. Billow, R. Titus, B. Lupini, F. Martorella, S. S. Paley, R. Carey and H. Lowen, *Harlem Hosp. Bull.*, Ann. Series, No. 1:120, 1960. 83. B. Khosrovani, M. Wertz and C. J. Jenkins, Jr., *Curr. Therap. Res.*, 2:442, 1960. 84. V. A. Renzi, *M. Times*, 38:1043, 1960. 85. D. Wheatley, *Practitioner*, 185:89, 1960. 86. R. Brandt and A. Beyer, *Ohio M. J.*, in press. 87. Correspondence, *J.A.M.A.*, 174:913 ff., 1960. 88. K. M. Logan and E. Matlin, *Clin. Med.*, 7:2042, 1960.

Dr. James E. McCormack Appointed

The appointment of Dr. James E. McCormack, Assistant Vice President of Presbyterian Hospital, New York City, as Dean of the Seton Hall College of Medicine was announced recently. Dr. McCormack succeeds the late Dr. Charles L. Brown. Former posts held by Dr. McCormack are: Assistant Dean, New York University School of Medicine; Executive Director of the Committee on Medical Sciences of the Research and Development Board of the Department of Defense; faculty member of the George Washington University School of Medicine; Associate Dean of the Post Graduate Medical School, New York University, and Professor of Medicine and Associate Dean of the Post Graduate School of the Columbia University College of Physicians and Surgeons. The Doctor is also Chairman of the Licensure Committee of the American Association of Medical Colleges.

Morehead Memorial Hospital

The Morehead Memorial Hospital, formerly dedicated and opened for patients in 1960, is named for the New York philanthropist, John Motley Morehead who contributed \$100,000 to the building fund. The building is located one mile east of Leaksville, North Carolina. There are no wards in the hospital; rooms are either private or semiprivate and are equipped with hi-low beds and systems for intercommunication with the nurses' stations. The entire building is completely air-conditioned. An intensive-care unit of four beds is also available. There are three operating rooms, two delivery rooms, labor rooms, and a four-bed recovery room. The x-ray department equipment includes deep therapy and portable x-ray machines. The total cost of this project was about \$1,700,000. The hospital is owned and operated by a 15-member board of trustees as a nonprofit institution.

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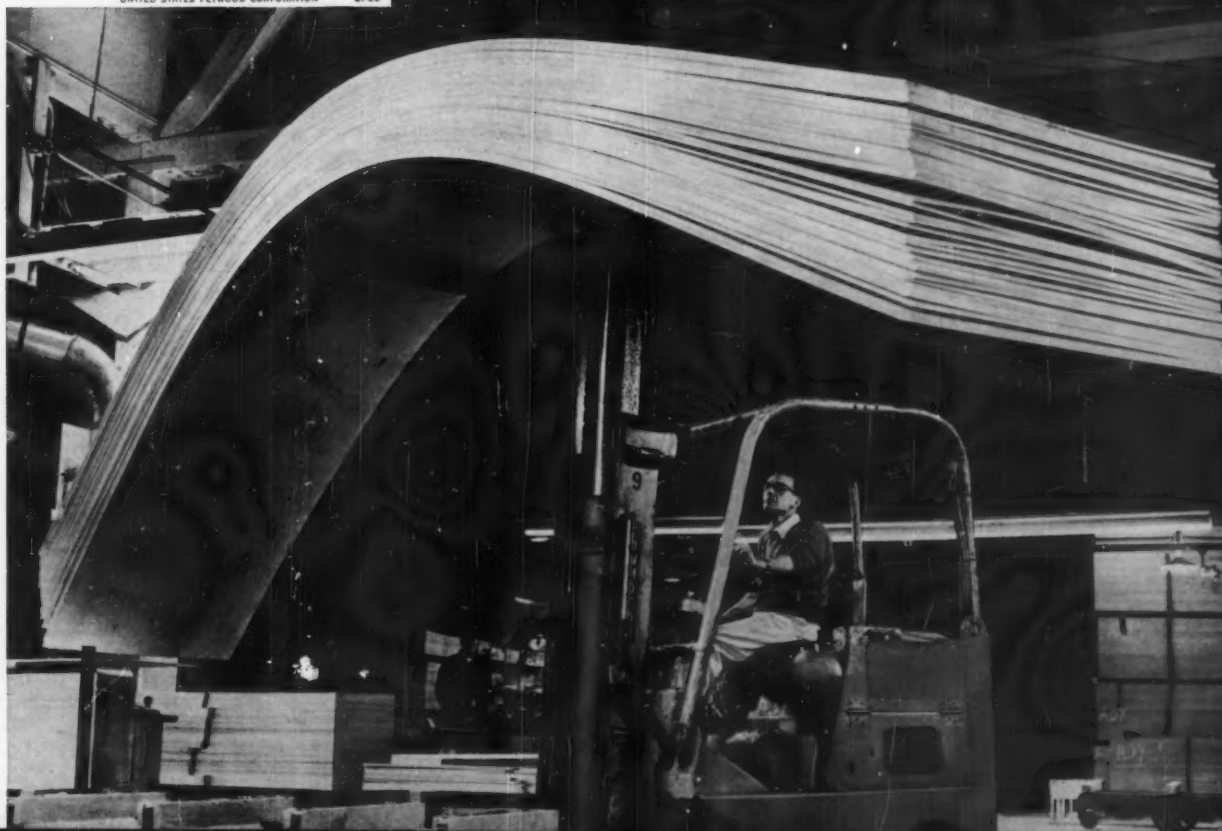
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(Answer from page 33a)

VARICES

Note numerous large defects, mainly intraluminal, in the lower half of the esophagus, which were capable of changing their size and shape during the Mueller and Valsalva maneuvers.

WHO IS THIS DOCTOR?

(Answer from page 57a)

JOSEPH IGNACE GUILLOTIN

MEDIQUIZ

(Answer from page 73a)

1 (A), 2 (D), 3 (C), 4 (E), 5 (D), 6 (E), 7 (D), 8 (E), 9 (C), 10 (B), 11 (E), 12 (A), 13 (D), 14 (C), 15 (A), 16 (A), 17 (D).

WHAT'S YOUR VERDICT?

(Answer from page 45a)

The Supreme Court reversed the judgment of the lower court and ordered a new trial, holding:

"A physician violates his duty to his patient and subjects himself to liability if he withholds any facts which are necessary to form the basis of an intelligent consent by the patient to the proposed treatment. At the same time the physician must place the welfare of his patient above all else. To explain to the patient every risk attendant upon any surgical procedure or operation, no matter how remote, may well result in alarming a patient who may as a result refuse to undertake surgery in which there is in fact minimal risk. The patient's mental and emotional condition is important and in certain cases may be crucial, and in discussing the element of risk a certain amount of discretion must be employed consistent with the full disclosure of facts necessary to an informed consent."

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SUPREME COURT OF KANSAS

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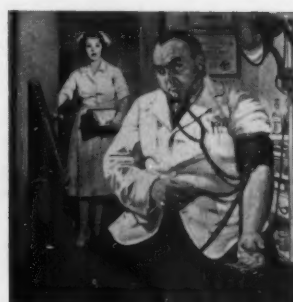
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A basic characteristic of the postcoronary patient, whether or not cholesterol levels are elevated, is his inability to clear fat from his blood stream as rapidly as the normal subject.¹⁻³ Figure #1 graphically illustrates this difference in fat-clearing time by comparing atherosclerotic and normal subjects after a fat meal.³

"Slow clearers" gradually accumulate an excess of fat in the blood stream over a period of years as each meal adds an additional burden to an already fat-laden serum. As shown in figure #2, the blood literally becomes saturated with large fat particles, presenting a dual hazard to the atherosclerotic patient: the long-term danger of deposition of these fats on the vessel walls,⁴ and the more immediate risk of high blood fat levels after a particularly heavy meal possibly precipitating acute coronary embarrassment.⁵

In figure #3, the test tube at the left contains lipemic serum, while the one at the right contains clear, or normal serum. If serum examined after a 12-hour fasting period presents a milky appearance, this is a strong indication that the patient clears fat slowly and is a candidate for antilipemic therapy in an effort to check a potentially serious situation.

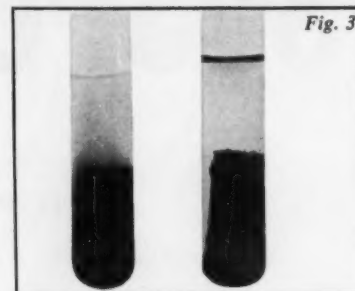
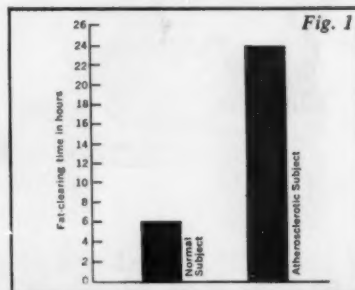
'Clarín', which is heparin in the form of a *sublingual tablet*, has been demonstrated to clear lipemic serum.^{2,6,7} Furthermore, a two-year study using matched controls resulted in a statistically significant reduction of recurrent myocardial infarction in 130 patients treated with 'Clarín'.⁸

'Clarín' therapy is simple and safe, requiring no clotting-time or prothrombin determinations. Complete literature is available to physicians upon request.

References: 1. Anfinsen, C. B.: Symposium on Atherosclerosis, National Academy of Sciences, National Research Council Publication 338, 1955, p. 218. 2. Berkowitz, D.; Likoff, W., and Spitzer, J. J.: Clin. Res. 7:225 (Apr.) 1959. 3. Stutman, L. J., and George, M.: Clin. Res. 7:225 (Apr.) 1959. 4. Wilkinson, C. F., Jr.: Annals of Int. Med. 45:674 (Oct.) 1956. 5. Kuo, P. T., and Joyner, C. R., Jr.: J.A.M.A. 163:727 (March 2) 1957. 6. Fuller, H. L.: Angiology 9:311 (Oct.) 1958. 7. Shaftel, H. E., and Selman, D.: Angiology 10:131 (June) 1959. 8. Fuller, H. L.: Circulation 20:699 (Oct.) 1959.

Clarín*

(sublingual heparin potassium, Leeming)



Indication: For the management of hyperlipemia associated with atherosclerosis, especially in the postcoronary patient.

Dosage: After each meal, hold one tablet under the tongue until dissolved.

Supplied: 'Clarín' is supplied in bottles of 50 pink, sublingual tablets, each containing 1500 I.U. of heparin potassium.

*Registered trade mark. Patent applied for.

Theo. Leeming & Co., Inc.
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*Your surgical convalescent feels better
because he is better with*

Durabolin[®]

(Nandrolone phenpropionate injection, ORGANON)

1 cc. once each week

for safe potent anabolic stimulation

- + to maintain positive nitrogen balance
- + to promote rapid wound healing
- + to restore appetite, strength, vitality
- + to shorten convalescence, save nursing time
- + to reduce the cost of recovery

Supplied: 1-cc. ampuls (box of three) and 5-cc. vials,
25 mg. nandrolone phenpropionate/cc.

Adults: 1 cc. i.m. each week, or 2 cc. every other week.



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In rheumatoid arthritis with diabetes mellitus. A 54-year-old diabetic with a four-year history of arthritis was started on DECADRON, 0.75 mg./day, to control severe symptoms. After a year of therapy with 0.5 to 1.5 mg. daily doses of DECADRON, she has had no side effects and diabetes has not been exacerbated. She is in clinical remission.*

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Supplied: As 0.75 mg. and 0.5 mg. scored, pentagon-shaped tablets in bottles of 100. Also available as Injection DECADRON Phosphate. Additional information on DECADRON is available to physicians on request. DECADRON is a trademark of Merck & Co., Inc.

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